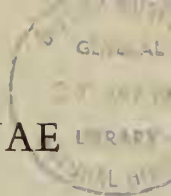


A REVISION OF THE SUBFAMILY COELIDIINAE
(HOMOPTERA : CICADELLIDAE)



TRIBES TINOBREGMINI, SANDERSELLINI AND THARRINI

BY

MERVIN WILLIAM NIELSON k

Forage Insects Research Laboratory, United States Department of Agriculture

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SYNOPSIS

The subfamily Coelidiinae is redefined and a key is given to the six tribes here recognized. Three of these tribes, Tinobregmini, Sandersellini and Tharrini, are fully revised in this paper, all the constituent genera and species being keyed out and described. Treatment of the remaining three tribes, Thagriini, Teruliini and Coelidiini, will follow. Two new tribes, two new genera and 60 new species are described. Five generic and 24 specific synonyms are newly established. A separate check-list, with synonyms, is given of the species of the three tribes treated here.

INTRODUCTION

FOR MANY years numerous species of coelidiine leafhoppers have been described in the subfamily Coelidiinae s. l. resulting in an accumulation of a few species in several genera to over 225 species in the genus *Coelidia* s. l. Species assigned to *Coelidia* were described from all major zoogeographical regions of the world.

The relegation of so many pantropical species into one genus was symptomatic of a greater problem which unfolded after a long study of the group, i.e., a valid generic concept of *Coelidia* had never been established. Thus, the subfamily was floating about in a taxonomic atmosphere with no attachments to stabilize it. The type-fixation of *Coelidia* by Kirkaldy (1901) did not provide a means to develop a valid concept because a type-specimen of the type-species, *venosa* Germar, was not available, and until recently it was believed to be no longer extant.

I began this study in 1968, restricting the problem initially to a revision of the genus *Coelidia*. However, at the suggestion of Dr Rauno Linnavuori of Turku, Finland, and at the urging of Dr John Evans of Sydney, Australia, I consented to expand the work to include a world-wide revision of the entire subfamily.

The generic concepts and definition of the subfamily Coelidiinae deviate considerably from those presented or understood by previous workers. Many genera are here removed and are here provisionally assigned to other subfamilies discussed below. Hopefully, this action will provide the stability that the subfamily did not previously possess.

The Coelidiinae as presently constituted embraces 6 tribes, nearly 100 genera and over 600 species. The magnitude of the work has made it necessary to publish the revision in four separate sections. The first presented herein treats the tribes Tinobregmini, Sandersellini and Tharrini, which represent about one-sixth of the total number of species. Treatment of the remaining tribes, Thagriini, Teruliini and Coelidiini will appear separately at later dates.

Under the Systematics, Morphology and Zoogeography sections I have limited the discussion to a synopsis of the subfamily and the first three tribes, reserving discussion of the remaining tribes until the conclusion of their individual treatments.

SYSTEMATICS

The subfamily Jassinae dominated the taxa of Coelidiinae for 126 years from the time Germar (1821) described the first species, *Coelidia venosa*, until the appearance of Evans' (1947) monumental work on a natural classification of leafhoppers. Although Evans was credited as the author of Coelidiinae by Metcalf (1964), it was Dohrn (1859) who originally proposed the subfamily (family Coelidiidae) and whose work I recognize as valid in accordance with Article 36 of the *International Code of Zoological Nomenclature*.

The development of the systematics of the subfamily was very slow. When the works of the reknowned hemipterists Distant (1908) and Baker (1915) were published, significant advances were made from which a modern classification was built.

Distant grouped the many tropical forms of the near east Jassinae on the basis of gross head characters and proposed several divisions (tribes) to deal with the genera, many of which he described as new. Two divisions, the Thagriaria and Jassusaria, were proposed to accommodate five and eight genera, respectively, seven of which are applicable to Coelidiinae. Baker, dissatisfied with Distant's arrangement, combined the groups, then added 10 genera from other regions of the world and placed them all under one section (tribe), Jassaria. Among 23 genera thus treated, 12 are applicable to Coelidiinae.

China & Fennah (1945) discovered that the type-species of *Iassus* Fabricius (for many years incorrectly spelled *Jassus*) and *Bythoscopus* Germar were conspecific, thus necessitating a selection of the next available name to accommodate the genus *Jassus* sensu Germar, 1833 et auct. Although these authors selected *Coelidia* Germar, 1821 as the next available name and designated *Coelidia venosa* Germar as the type-species, Kirkaldy (1901) and Oman (1936) had previously fixed the type of *Coelidia*.

Evans (1947) contributed much to the development of the present classification when he relegated 29 pantropical and three holarctic genera to the group. Oman (1949) and Linnavuori (1959) recognized the subfamily and added important genital characteristics to the classification. Metcalf (1964) listed all of the known tribes, genera and species of Coelidiinae under the family Coelidiidae, giving subordinate recognition to the subfamilies Neocoelidiinae and Tartessinae, neither of which is closely related to Coelidiinae.

The Tinobregmini was recently established by Oman (1949) to accommodate one genus of the Nearctic Region. Metcalf (1964) recognized the grouping and listed 11 species and subspecies.

DeLong (1945) proposed the tribe Sandersellini for the monobasic genus *Sandersellus*. Equal recognition was given by Metcalf (1964).

The tribe Tharrini is here proposed to accommodate a very large genus, *Tharra*, and two new genera, *Neotharra* and *Haranthus*, thus removing *Tharra* from Jassaria of Baker (1915) and from Coelidiini, placed there by Metcalf (1964). The unique combination of head characters and bipendulate aedeagus has resulted in considerable chresonymy and greatly broadened the geographical range of the group.

MORPHOLOGY

The subfamily Coelidiinae embraces such a diversity of forms that it is not possible to generalize upon any given morphological feature of the group. Thus, it is necessary to remind the reader that the many exceptions that are evident are being dealt with in more detail at the generic and specific levels.

A favourable attribute of coelidiine leafhoppers is that the head bears gross features that are useful for differentiating higher taxa as well as fine characters for distinguishing many species. Similarly, the male genitalia, which form the basis of the present classification, offer significant contributions at all taxonomic levels.

Coelidiine leafhoppers vary in size from about 4 mm to nearly 14 mm and in shape from slender (Tharrini) to robust (Teruliini). In general habitus they often resemble some issid or ogeriine fulgoroids by virtue of their narrow heads and broad elytra. Many species are brightly coloured but most are fuscous to testaceous, particularly the elytra.

The head, which varies in length and width in relation to the pronotum, is always narrower than the pronotum in all tribes except for one genus in the tribe Teruliini. More important is the length and shape of the crown, particularly that portion distad of the anterior margin of the eyes, which may be even with the anterior margin of the eyes or extend distally to one-half or more of its entire median length and vary from rounded to broadly or sharply angulate. Of similar value is the disk of the crown which may be slightly depressed or distinctly elevated above the level of the eyes (Tharrini) and with the lateral margins distinctly carinate or not, and/or parallel or convergent posteriorly. Numerous striations are present on the disk which radiate posteriolaterally at a point near the middle of the apex and are particularly prominent in Tharrini. The ocelli vary in position and are situated anteriorly in broad-headed forms and laterally in long-headed forms. The eyes are unusually large and vary in the amount of lateral tumescence in relation to the entire dorsal area of the head. The posteriolateral portion often overlaps the anteriolateral margin of the pronotum.

On the face the clypeus is the most diagnostic character for many groups and varies in shape and tumescence. Longitudinally, the clypeus occupies a major portion of the face but is usually broader anteriorly than posteriorly. The lateral margins are sometimes carinate anterior to the antennal fossa. Along the anterior margin the surface is rugulose in the Tharrini and Thagriini. There is a median longitudinal carina in some species of *Tharra*, and its presence (Teruliini) or absence (Coelidiini) conveniently separates these tribes. The clypellus is short and the lateral margins are usually parallel or expanded apically in most forms. An unusual feature occurs in many species where the anterior portion is very broad and tumescent.

The pronotum is short and broad but rather uniform in length and medially is often shorter than the scutellum. There is a dorsopleural carina in all genera except *Sandersellus*, which is bicarinate. A medial carina which varies from complete to incomplete is present in a few species among most of the tribes. On the surface of the pronotum are many bullae or knobs in nearly all forms.

The scutellum is very large in relation to the pronotum among all groups except the Tinobregmini and one species of *Tharra*. In the Tinobregmini the posterior margin of the pronotum overlaps the anterior margin of the scutellum and base of elytra, giving a distinctly smaller appearance to the scutellum.

The forewings vary in length from brachypterous in the Tinobregmini to normal in the remaining tribes. Almost without exception, venation is prominent and incomplete, lacking M_{1+2} and cross vein $m-Cu_3$ (outer anteapical cell closed). Several species of *Thagria* have two closed anteapical cells. Five apical cells are present in all tribes. The appendix varies from well-developed to nearly lacking in only a few species. The hind wings have not been studied thoroughly

enough to characterize here, but in many forms the costal margin is expanded basally.

The male genitalia offer the most useful characters for distinguishing the genera and species, and on the whole are of particular value for separating the tribes. The male pygofer varies in shape and is usually adorned with one to three pairs of processes arising from the caudal margin. Setae are present or absent; when present are extremely long in some forms. In the Thagriini the tenth segment often has one or two pairs of prominent processes. The aedeagus is especially diagnostic among all taxa and may be symmetrical or asymmetrical with both conditions occurring in the same tribe but rarely in the same genus. Generally, the aedeagus is tubular with or without processes or with a ventral paraphysis (Thagriini), or bipendulate (Tharrini), or assortment of shapes with several to numerous processes. The gonopore is situated on the shaft at various points from basad of middle to the apex and may exit dorsally, ventrally or laterally. In all groups the aedeagus is freely articulated with the connective which also varies from narrowly Y-shaped to broadly Y-shaped with a short stem. The styles vary in length or shape and often are adorned with processes. They are sometimes asymmetrical, a condition not known to occur in any other cicadellid group.

In all groups the valve is fused ventrally to the pygofer and is often exposed (Tharrini) or concealed (Thagriini) by the eighth sternum. The plates are segmented subbasally in the Tharrini and Thagriini and entire in the remaining tribes. They are very narrow throughout in Thagriini, almost subquadrate in Tharrini and often very broad throughout in Teruliini. Setal arrangement varies from uniseriate (Thagriini) to random arrangement. The setae are extremely long in many forms of Tharrini and some forms of Coelidiini.

The female genitalia are of some worth in differentiating a limited number of species in several genera, particularly in the Teruliini and Coelidiini.

The posterior femoral setal arrangement is usually 2 : 2 : 1 in all groups, but the setae basad of the proximal pair are not arranged in exact apposition to each other.

ZOOGEOGRAPHY

The coelidiine leafhoppers are primarily tropical in the Southern Hemisphere faunal regions. Only a few species occur in the Temperate Zone and these are all of tropical origin. Generic diversity is greatest in the Neotropical Region whereas species diversity is greatest in the Oriental realm. There are more genera in the Neotropical Region than in all other regions combined. Over half of the known species are in the Oriental Region. The remainder are scattered among the other geographical regions with only about 50 species represented in the Ethiopian realm.

The Tinobregmini are represented in the Nearctic and Neotropical regions, whereas Sandersellini is restricted to the Neotropical Region. Although the genus *Tinobregmus* occurs in southern United States and Mexico, its origin is probably Neotropical having close affinity to the genus *Chilelana* from Chile and Bolivia.

Tharrini are Australian and Oriental and rarely occur north of the 20th parallel in the Northern Hemisphere and south of the 20th parallel in the Southern Hemisphere. Only one species based on a single specimen is in the Ethiopian Region, and this record is considered doubtful.

The large genus *Tharra* and its relatives occupy the subregions of Melanesia, Micronesia, New Guinea, Indonesia, southern Philippines, and Malaysia of the Oriental region. Its rare occurrence in northern Australia and proliferation in the subregions are indicative of Indo-Malayan origin.

TECHNIQUES

The details of preparation of genital structures of leafhoppers for dissection and study are given by Oman (1949) and Young & Beirne (1958). I have followed their methods with some modifications. The bodies of most coelidiine leafhoppers are heavily sclerotized and require a long time for potassium hydroxide solution to clear the internal viscera. A system was devised in which the abdomens of 40-50 coded leafhoppers were cleared simultaneously by allowing the structures to soak overnight at room temperature in a saturated solution of potassium hydroxide. The following day individual abdomens were washed in distilled water, transferred to ten per cent acidulated water, then washed in distilled water before examination and storage in glycerated microvials.

ILLUSTRATIONS

All illustrations were prepared freehand with the aid of an ocular grid. The internal male structures were drawn at ocular magnifications of $\times 90$ to $\times 120$ and the external structures at lesser magnification, depending upon the size of the species. The characters illustrated are not always shown in detail, particularly setae which were too numerous on the male pygofer and plate. The female seventh sternum was included whenever it was diagnostic.

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Subfamily COELIDIINAE Dohrn

Coelididae Dohrn, 1859 : 84. Type-genus: *Coelidia* Germar, 1821.

Concepts of the subfamily Coelidiinae proposed by earlier workers (Matsumura, 1914; Oman, 1936; 1949; Evans, 1947; 1971; Linnavuori, 1959; 1960a; 1960b; Metcalf, 1964) have been based for the most part on studies of a few genera within certain geographical areas. Earlier attempts to fully define the generic affinities of Coelidiinae were difficult since up until this revision the generic concept of *Coelidia* per se never had been accurately assessed, thus previous concepts formulated were actual assumptions based on presumed species of *Coelidia* without recourse to the type-species of *Coelidia*.

The syntypes of the type-species, *Coelidia venosa* Germar were recently found in the Naturhistorisches Museum in Vienna, along with the types of three other Germar species, *pruinosa*, *poecilia*, and *variegata*, all described in the genus *Coelidia*. *Coelidia venosa* is represented by two female specimens, one of which I shall be designating as a lectotype in my treatment of that species in the tribe Coelidiini. This specimen has been compared to and accurately associated with a male specimen on loan from the American Museum of Natural History, New York. The true identity of *venosa* and its generic characteristics thus establishes a concept within which all other related genera must fall so that an appropriate definition of the subfamily can be made.

When Matsumura (1914) treated the Coelidiinae of Japan using the German vernacular, *Coelidinen*, he actually used the characteristics of *Coelidia conspersa* (Stål) to form his own generic concept of *Coelidia* in his treatment of nine species of the Japanese fauna. None of these species belong to *Coelidia* but have been relegated to two new genera and one old genus in my treatment of the tribe Coelidiini.

Kirkaldy's (1901) and Oman's (1936) selection of *Coelidia venosa* Germar as the type-species of the genus was presumably based on priority by pagination rather than as being 'represental' of the genus since they did not have access to the type-specimen.

Evans (1947) was first to broaden the generic affinities of the subfamily when he treated 32 generic names, 26 of which he considered valid. He characterized the group principally on gross external morphology, with emphasis on head characters and venation of the elytra. Genera that were included varied from those having incomplete tegminal venation, i.e., both M_{1+2} and cross vein $m - Cu_3$ wanting (one closed anteapical cell) to those having complete venation (three

closed anteapical cells). It is noteworthy that all genera with complete tegminal venation have an intact ninth sternum (male valve) which is a separate, ventral triangular sclerite attached laterally to the pygofer. On the other hand, all genera with incomplete tegminal venation (vein M_{1+2} missing or one closed anteapical cell) have the male valve fused ventrally to the pygofer. I consider the combination of these latter characters as well as other characters discussed below as significant subfamily attributes and therefore have excluded all genera from the subfamily Coelidiinae treated by Evans (1947; 1971) that do not possess these characters. The intermediate genera (those with two closed anteapical cells and separate male valve) have also been excluded.

The following genera are excluded with provisional assignment to other subfamilies: *Aeturnus* Distant, *Selenopsis* Spinola and *Wadkupfia* Linnavuori, to the Deltocephalinae; *Dardania* Stål, *Iberia* Kirkaldy and *Stegelytra* Mulsant & Rey to the Stegelytrinae. The genera *Aletta* Metcalf, *Alocoelidia* Evans, *Caclidioides* Signoret, *Equeefa* Distant, *Iraquerus* Ghauri, *Iturnoria* Evans, *Malagasiella* Evans, *Palicus* Stål, *Protonesis* Spinola, *Cyrta* Melichar, *Doda* Distant, *Kasinella* Evans, *Kunasia* Distant, *Placidellus* Evans, *Placidus* Distant, *Sabimamorpha* Schumacher and *Toba* Schmidt cannot be assigned to any other existing subfamily; new subfamilies will be proposed for them in forthcoming studies.

Oman (1949) was first to assess the significance of genitalia of Coelidiinae in his descriptions of two nearctic genera (*Coelidia* s. l. and *Tinobregmus*) and establishment of the tribe Tinobregmini.

Linnavuori (1959) presented perhaps the most complete concept of the Coelidiinae in his characterization of the group. His concept was no doubt influenced by a prior work (Linnavuori, 1956) on descriptions of 21 new species and redescriptions of 13 old species of Coelidiinae from the Neotropical realm. Linnavuori (1959) utilized both external characters of the body and the internal male genitalia. However, in his studies of the Coelidiinae of Fiji Islands (1960a) and Micronesia (1960b) he apparently followed Wagner's (1951) system of hierarchical classification. The Coelidiinae were treated under a subfamily group, the Cicadellides, characterized as those subfamilies possessing ocelli on the anterior margin of the head or crown, valve usually more or less triangular, and articulated with pygofer (fused to pygofer in primitive forms) and plates usually triangular. Aside from the Typhlocybides, the other subfamily group, Iassides, are defined as subfamilies having ocelli distinctly on the face or the head, the ninth sternum of the male never triangular and always fused to the pygofer, and the male plates always parallel sided.

The Coelidiinae as presently constituted do not fit into either group. Among 6 tribes, nearly 100 genera and over 600 species treated in my revision, the subfamily characters include major attributes common to both subfamily groups. These are: ocelli always near the anterior margin of the crown or laterally in long-headed forms, male valve always fused ventrally to the pygofer, and the male plate elongate, parallel sided, sometimes laterally appressed, and never triangulate.

Wagner's hierarchical system of classification has some notable limitations, and while it is not my purpose in this paper to propose changes that are necessary,

it should be pointed out that the system does not work for the Coelidiinae, neither on a worldwide basis nor in a restricted geographical region. Linnavuori's (1960a; 1960b) treatment of the genera *Tharra*, *Coelidia* and *Muirella* is a case in point.

A discussion of the generic relationships of Coelidiinae, and its relationship to other subfamilies of Cicadelloidea by Evans (1971) is based on the assumption that Wagner's (1951) system of classification is correct. Evans holds that many genera of the Coelidiinae s.l. such as *Placidus*, *Placidellus*, *Kasinella*, *Caelidioides*, *Iturnoria*, and *Malagasiella* would lose their relationships to *Coelidia* if they were removed to other subfamilies. I have found no basis to suggest that these and other genera which I excluded from Coelidiinae are so related to *Coelidia* when in fact there are numerous other genera much more closely related to the nominate genus.

The final establishment of the subfamily interrelationships in the Cicadellidae, or relationships at higher levels is somewhat premature in view of our overall lack of knowledge, especially of peripheral groups that have been split off as a result of taxonomic studies of several subfamilies, viz. Cicadellinae, or subfamilies that have been studied very little, such as the Evacanthinae. Moreover, there are doubtless many undescribed genera in the tropical regions of the world which, when studied and described, may provide ample evidence to show intersubfamily relationships heretofore unknown. I have elected not to follow the hierarchical classification of Metcalf (1964) in which he gives a family status to the Coelidiinae, for the reasons described above and for those advanced by Oman (1949) and Young (1968).

In consideration of all the changes discussed above, a more complete concept of the subfamily as redefined follows.

Head almost always narrower than pronotum; eyes large, posteriolateral angles overlapping anteriolateral margin of pronotum; crown usually narrow, often produced distad of anterior margin of eyes, disk often elevated above level of eyes and usually striate radially, sometimes carinate laterally; ocelli near anterior margin of crown, near lateral margins above eyes in long-headed forms; pronotum short, surface knobbed, dorso-pleural line carinate (bicarinate in *Sandersellus*); scutellum large (exception: Tinobregmini); elytra elongate (exception: brachypterous forms of Tinobregmini), usually broad apically, venation incomplete, outer anteapical cell closed (two closed anteapical cells in several species of *Thagria*); wings with costal margin expanded basally; clypeus elongate, usually broad anteriorly and tapered posteriorly, sometimes tumescent, often with median longitudinal carina; clypellus short, lateral margins sometimes broad anteriorly but usually expanded posteriorly or parallel; legs with spinulation well developed, posterior femoral setal arrangement 2 : 2 : 1, male valve always fused ventrally to pygofer; pygofer usually bears one or more pairs of processes on caudal margin; tenth segment sometimes with pair of processes; aedeagus usually asymmetrical and usually with secondary processes or spines; connective Y-shaped, articulated basally to aedeagus; styles usually long, often with secondary processes, sometimes asymmetrical; plate entire, large, elongate, narrow to broad (segmented subbasally in Tharrini and Thagriini), sometimes appressed laterally, sometimes glabrous, sometimes setose or with macrosetae.

KEY TO THE TRIBES OF COELIDIINAE

- 1 Base of elytra exposed 2
 - Base of elytra concealed **TINOBREGMINI** Oman (p. 13)
 2 (1) Pronotum unicarinate laterally 3
 - Pronotum bicarinate laterally **SANDERSELLINI** DeLong (p. 20)
 3 (2) Male plate segmented subbasally, often appressed laterally 4
 - Male plate entire, usually ventrally appressed to pygofer 5
 4 (3) Aedeagus bipendulate (unipendulate in *Neotharra*), without paraphysis; style
 clawed or hooked apically; plate elliptical, subglobular, or subquadrate
 **THARRINI** trib. n. (p. 31)
 - Aedeagus not bipendulate, with large ventral paraphysis articulated basally
 with connective or with paired, long slender processes arising from base of
 aedeagus; style usually lanceolate; plate long and very narrow (exception
Tahara) **THAGRIINI** Distant
 5 (3) Clypeus with complete median longitudinal carina or with broad, elevated
 median longitudinal ridge **TERULIINI** trib. n.
 - Clypeus without median longitudinal carina or elevated ridge or with partially
 complete carina **COELIDIINI** Dohrn

Tribe **TINOBREGMINI** Oman

Tinobregmini Oman, 1949 : 55. Type-genus: *Tinobregmus* Van Duzee.

Small, coelidiine leafhoppers; brachypterous, or subbrachypterous; sexual dimorphism apparent.

Head narrower than pronotum, crown significantly produced beyond proximal margin of eyes, broad apically and narrowed basally; pronotum small, smooth, posterior margin concealing base of elytra; scutellum small, elytra with obscure venation and with five apical cells, three anteapical cells; hind wings very small, nonfunctional in brachypterous morphs; clypeus long and narrow without median longitudinal carina; clypellus extending distally beyond margin of genae; setal arrangement on hind femur 2 : 2 : 1.

Male genitalia symmetrical or slightly asymmetrical.

The tribe is restricted to the new world. Only two genera are known. DeLong (1969) regarded *Chilelana* DeLong as a close relative of *Tinobregmus* Van Duzee with which I agree and have therefore placed the former genus in Tinobregmini. The tribe can be distinguished from all others in Coelidiinae by the concealed bases of the elytra, a character heretofore unreported.

KEY TO THE GENERA OF TINOBREGMINI

- 1 Pronotum with lateral carina dorsad of costal margin of elytra; middle anteapical cell open; aedeagus symmetrical, narrow with apical two-thirds tapered, subcirculate in lateral aspect; gonopore apical (Text-fig. 12) **CHILELANA** DeLong (p. 14)
 - Pronotum with lateral carina in line with costal margin of elytra; middle anteapical cell closed; aedeagus slightly asymmetrical, tube-like, slightly sinuate and curved apically in lateral aspect; gonopore subapical (Text-fig. 19)
 **TINOBREGMUS** Van Duzee (p. 16)

GENUS *CHILELANA* DeLong

(Text-figs I-12)

Chilelana DeLong, 1969 : 462. Type-species: *Chilelana artigasi* DeLong, by original designation and monotypy (DeLong, 1969 : 462).

Small, brachypterous or subbrachypterous species, with male well marked with ivory to orange and black markings on elytra, female similarly marked but sometimes uniformly stramineous.

Head narrower than pronotum, produced well beyond proximal margin of eyes; crown broad apically, tapered basally, disk elevated; eyes large, slightly bulbous laterally; pronotum short with anterior margin overlapping base of elytra, lateral carina dorsad of costal margin of elytra; elytra with obscure venation, sometimes extra cross veins, five apical cells and three antepical cells, middle cell open basally; hind wings small, possibly non-functional in brachypterous morphs, well developed in subbrachypterous morphs; clypeus long without median longitudinal carina; clypellus extending beyond genae.

Male genitalia symmetrical; pygofer with short caudodorsal projection and membranous projection about middle of caudal margin; aedeagus broad basally, apical two-thirds long, filamentous, semicircular in lateral aspect, articulated basally with apex of connective; gonopore apical; connective Y-shaped, stem not lying in same plane as arms, curved ventrally; dorsal apodeme simple, slender plate, attached by membrane; style long with subapical projection; plates long, broad apically, appressed laterally.

Female seventh segment broadly concave on posterior margin.

Chilelana can be separated from *Tinobregmus* by having a long semicircular aedeagus and broad plates. It is at present known from Chile and Bolivia.

Chilelana artigasi DeLong

(Text-figs I-12)

Chilelana artigasi DeLong, 1969 : 462. Holotype ♂, CHILE (OSU, Columbus) [examined].

Length: brachypterous morph, ♂ 3.10-3.80 mm, ♀ 4.60-5.10 mm; subbrachypterous morph, ♂ 4.50-5.00 mm, ♀ 5.20-6.20 mm.

Colour as in generic description.

Brachypterous morph with short crown, anterior margin blunt and rounded; subbrachypterous morph with crown elongate, anterior margin more sharply produced; elytra with base concealed by anterior margin of pronotum in sexes of both forms; abdomen with terminal segments exposed in brachypterous ♀; tenth segment and sometimes plates exposed in brachypterous ♂; pygofer with terminus sometimes exposed in subbrachypterous ♀.

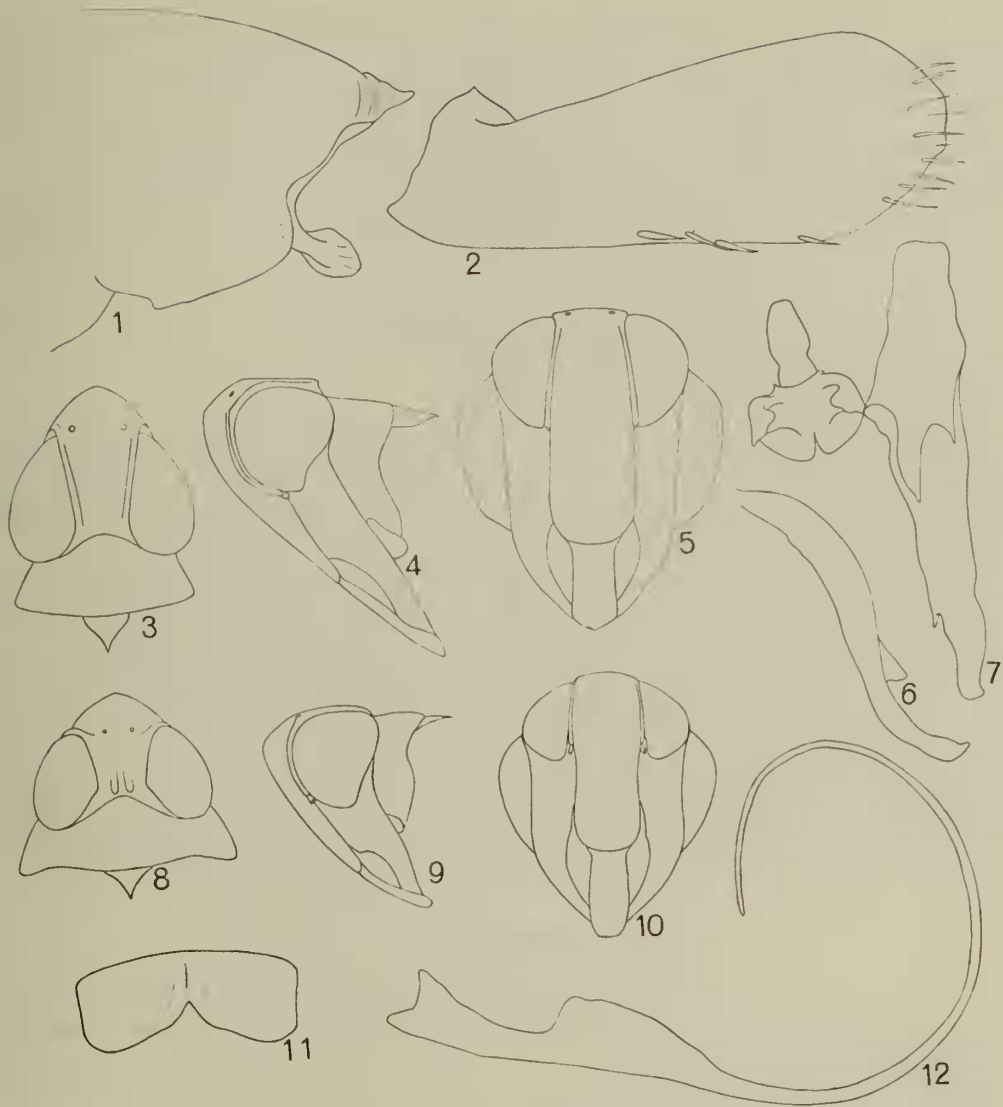
Male genitalia symmetrical; pygofer in lateral aspect with prominent, short, sclerotized projection caudodorsally and small, short, concealed membranous projection caudoventrally; aedeagus broad basally, articulated basally with apex of connective, arising ventrad of arms of connective, apical two-thirds narrow, tube-like, semicircular in lateral aspect; gonopore terminal; style in dorsal aspect long, with subapical projection on inner lateral margin, apical one-quarter very narrow; connective Y-shaped in dorsal aspect, stem curved ventrad in lateral aspect; plate in lateral aspect long, broad apically.

Female seventh sternum with posterior margin broadly concave.

DISTRIBUTION. Chile, Bolivia (new record).

SPECIMENS EXAMINED.

Chilelana artigasi DeLong, holotype ♂, CHILE: Provincia Concepcion Camina a



FIGS 1-12. *Chilelana artigasi* DeLong. 1, male pygofer, lateral view; 2, plate, ventral view; 3, head, pronotum, and scutellum, dorsal view, long form; 4, head, pronotum, and scutellum, lateral view, long form; 5, face, long form; 6, style, slightly enlarged, lateral view; 7, connective and style, dorsal view; 8, head, pronotum and scutellum, dorsal view, short form; 9, head, pronotum and scutellum, lateral view, short form; 10, face, short form; 11, female seventh sternum, ventral view; 12, aedeagus, lateral view.

Santa Juarra, 14.xi.1968 (*T. Cekalovic*) (OSU, Columbus). DeLong (1969) described the holotype from a different locality (Concepcion, Chile, 21.xii.1967 (*D. DeLong & J. Artigas*)), suggesting an error in labelling the type-specimen.

Brachypterous form. CHILE: Aconcagua Prov., 2 km S. Papudo, 2 ♂, 1 ♀, 18.xi.1967 (L. & C. W. O'Brien); Zapallar, 4 ♂, 3 ♀, 15.xii.1950 (Ross & Michelbacher); Coquimbo Prov., Frey Jorge National Park, 15 km S.W. Pachingo, 100–200 m, 3 ♂, 1 ♀, 20.x.1960 (E. I. Schlinger, M. E. Erwin); 11 km N. Los Vilos, 1 ♂, 2 ♀, 15.xii.1967 (L. & C. W. O'Brien); Puerto Oscuro, 31° 26' S., 71° 37' W., sandy beach, 6 ♂, 23.xi.1966 (E. I. Schlinger); 4 km N. Punta Molles, 3 ♂, 3 ♀, 12.xi.1967 (L. & C. W. O'Brien); Valparaiso Prov., Algarrobo, 1 ♀, 31.xii.1967 (L. & C. W. O'Brien); 20 km N. Concon, 1 ♂, 5 ♀, 26.xi.1950 (Ross & Michelbacher).

Subbrachypterous form. CHILE: (no locality), 5 ♂, 3 ♀, x. 1940 (E. P. Reed); Alconcagua Prov., 2 km N. Cabildo, 1 ♂, 1 ♀, 28.xi.1950 (Ross & Michelbacher); Zapallar, 3 ♂, 3 ♀, 27.xi.1950 and 1 ♀, 15.xii.1950 (Ross & Michelbacher); Quillota Prov., Las Palmas, 4 ♂, 2 ♀, 20–21.xii.1955 (Pena), Cobquecura, 33 ♂, 26 ♀, 14.xii.1953 (L. E. Pena); Curanipe, 3 ♂, 3 ♀, 4.xii.1953 (L. E. Pena); Nogueche, 2 ♂, 4 ♀, 15.xii.1953 (L. E. Pena); Pelluhue, 1 ♂, 2.xii.1953 (L. E. Pena); Pta. Iglesia, 2 ♀, 14.xii.1953 (L. E. Pena); Tregualemo, 3 ♂, 5 ♀, 6.xii.1953 (L. E. Pena); Valparaiso, 2 ♂, 2 ♀ (no date) (E. P. Reed). BOLIVIA: Alcoche, Las Pas, Malaise trap, 600 m, 28 ♂, 15 ♀, 17.xii.1966 (Baloch, Mahunka & Zichsi).

BIOLOGY. DeLong (1969) collected specimens in Chile from shrubs on bluffs along the beach of the Pacific Ocean. Specimens examined showed that collections were made from plants on sand dunes and sandy beaches. Populations were prevalent from September to December.

REMARKS. *Chilelana artigasi* is the only known species in the genus and can be easily distinguished from the nearest generic relative, *Tinobregmus*, by the long semicircular aedeagus. The type-specimen is a subbrachypterous morph. The two morphs of *artigasi* described above are so closely identical in genitalic characters that I have elected not to describe the brachypterous form as a distinct species from *artigasi*, inasmuch as both morphs are sympatric. Moreover, there are no collection records for the period January to August, which when available may suggest that brachyptery is the effect of changes in photoperiod and/or temperature. Until sufficient supporting biological evidence becomes available to the contrary, it seems best to consider both populations as identical species.

Genus *TINOBREGMUS* Van Duzee

(Text-figs 13–22)

Tinobregmus Van Duzee, 1894 : 213. Type-species: *Tinobregmus vittatus* Van Duzee, by monotypy (Van Duzee, 1894 : 214).

Tinobregmus Van Duzee; Metcalf, 1964 : 12.

Tinobregmus Van Duzee; DeLong, 1969 : 462.

Small, robust brachypterous species.

Colour uniformly stramineous to golden-yellow with apex of wings black in males, pale irregularly stramineous to uniformly stramineous with or without black apical colour on elytra in females.

Head much produced anteriorly, more so than in *Chilelana*; crown broad apically becoming very narrow basally, disk elevated; eyes large, not conspicuously swollen laterally; pronotum short with anterior margin overlapping base of elytra, lateral carina in line with costal margin of elytra; elytra as in *Chilelana* except forms are almost entirely subbrachypterous in males and brachypterous in females, outer and middle anteapical cells closed; hind wings much reduced, possibly nonfunctional in both sexes; clypeus long without median longitudinal carina; clypellus produced beyond genae.

Male genitalia slightly asymmetrical; pygofer with small projection on caudodorsal margin;

aedeagus asymmetrical, long, tube-like, slightly curved in lateral aspect; gonopore subterminal; style long with lateral projection about middle in dorsal aspect, expanded apically; connective Y-shaped with short stem; plates appressed ventrally to pygofer, very narrow at apical half. Female seventh sternum with posterior margin produced slightly at middle.

This genus can be distinguished from *Chilelana* by having a tube-like asymmetrical aedeagus and by the pronotum with lateral carina in line with the costal margin of the elytra. Its known distribution extends from southern U.S.A. to Bermuda and eastern Mexico.

Tinobregmus vittatus Van Duzee

(Text-figs 13-22)

Tinobregmus vittatus Van Duzee, 1894 : 214. Lectotype ♀, U.S.A.: Florida (ISU, Ames), designated by Oman (1947) [examined].

Tinobregmus pallidus Osborn, 1911 : 261. Holotype ♀, U.S.A.: Texas (OSU, Columbus) [examined]. **Syn. n.**

Tinobregmus viridiscens [sic] DeLong, 1916 : 92. Holotype ♀, U.S.A.: Tennessee (OSU, Columbus) [examined]. **Syn. n.**

Tinobregmus moodii Gibson, 1917 : 183. Holotype ♀, U.S.A.: Missouri (USNM, Washington) [examined].

Tinobregmus invenustus Lawson, 1932 : 363. Holotype ♀, U.S.A.: Louisiana (UK, Lawrence) [examined]. **Syn. n.**

Tinobregmus pallidus var. *elegans* Lawson, 1932 : 363. Holotype ♀, U.S.A.: Texas (UK, Lawrence) [examined]. **Syn. n.**

Tinobregmus vittatus var. *clavatus* DeLong, 1945b : 98. Holotype ♀, MEXICO (OSU, Columbus) [examined]. **Syn. n.**

Tinobregmus brevis DeLong, 1945b : 98. Holotype ♀, MEXICO (OSU, Columbus) [examined]. **Syn. n.**

Tinobregmus vittatus Van Duzee; Metcalf, 1964 : 16.

Tinobregmus pallidus Osborn; Metcalf, 1964 : 14.

Tinobregmus viridescens DeLong; Metcalf, 1964 : 15.

Tinobregmus moodii Gibson; Metcalf, 1964 : 14.

Tinobregmus invenustus Lawson; Metcalf, 1964 : 14.

Tinobregmus pallidus var. *elegans* Lawson; Metcalf, 1964 : 15.

Tinobregmus vittatus var. *clavatus* DeLong; Metcalf, 1964 : 16.

Tinobregmus brevis DeLong; Metcalf, 1964 : 14.

Length: ♂ 3.30-4.60 mm, ♀ 5.00-6.90 mm.

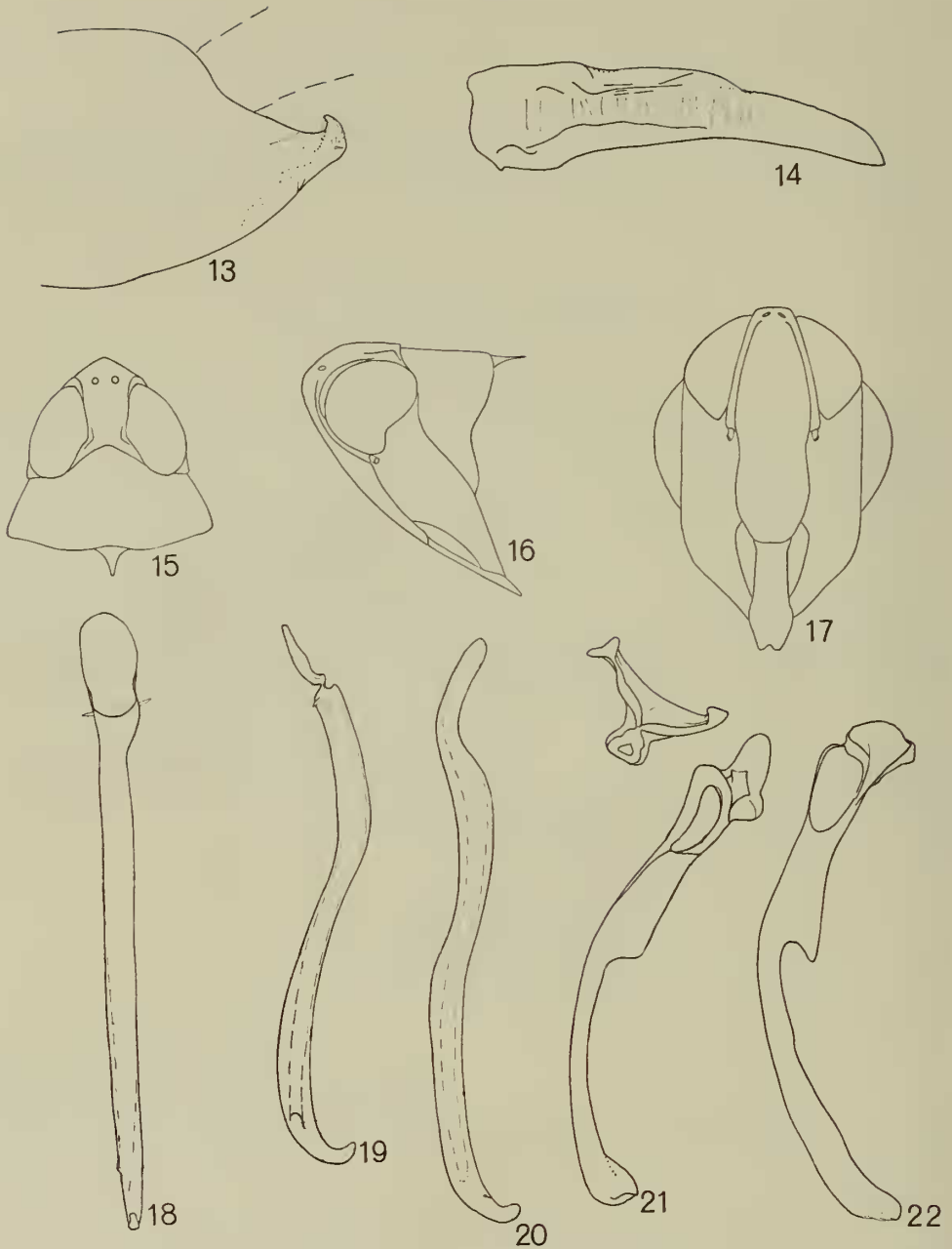
Colour as in generic description.

Head with crown produced beyond proximal margin of eyes; crown with anterior margin varied from slightly rounded to conical; elytra with bases concealed by anterior margin of pronotum; terminal abdominal segments exposed in both sexes; hind wings extremely short and nonfunctional.

Male genitalia slightly asymmetrical; pygofer in lateral aspect terminating to small projection on caudal margin; aedeagus asymmetrical, articulated basally with connective, long, tube-like, slightly sinuate throughout length and curved apically in lateral aspect; gonopore subterminal; style in dorsal aspect long, curved laterally with apical half constricted and apex slightly enlarged; connective in dorsal aspect short, Y-shaped; plate in ventral aspect long, broad basally, narrowed apically.

Female seventh sternum with anterior margin slightly produced.

DISTRIBUTION. Bermuda, Mexico (new record), United States.



FIGS 13-22. *Tinobregmus vittatus* Van Duzee. 13, male pygofer, lateral view; 14, plate, ventral view; 15, head, pronotum and scutellum, dorsal view; 16, head, pronotum, and scutellum, lateral view; 17, face; 18, aedeagus, dorsal view; 19, aedeagus, lateral view; 20, aedeagus (College Station, Mississippi), lateral view; 21, style and connective, dorsal view; 22, style (College Station, Mississippi), dorsal view.

SPECIMENS EXAMINED.

Tinobregmus vittatus Van Duzee, lectotype ♀, U.S.A.: Florida (ISU, Ames). *Tinobregmus pallidus* Osborn, holotype ♀, U.S.A.: Texas, Plano, v. 1907 (*E. S. Tucker*) (OSU, Columbus). *Tinobregmus pallidus* var. *elegans*, holotype ♀, U.S.A.: Texas, Kendall Co., 22.vii.1927 (*A. M. James*) (UK, Lawrence). *Tinobregmus viridiscens* DeLong, holotype ♀, U.S.A.: Tennessee, Clarksville, 22.vii.1915 (*D. M. DeLong*) (OSU, Columbus). *Tinobregmus moodii* Gibson, holotype ♀, U.S.A.: Missouri, Branson, 22.viii.1916 (*F. M. Moody*) (USNM, Washington). *Tinobregmus invenustus* Lawson, holotype ♀, U.S.A.: Louisiana, Natchitoches Par., 16.viii.1928 (*R. H. Beamer*) (UK, Lawrence). *Tinobregmus vittatus* var. *clavatus* DeLong, holotype ♀, MEXICO: Vera Cruz, Fortin, 9.x.1941 (*Caldwell, Good, Plummer & DeLong*) (OSU, Columbus). *Tinobregmus brevis* DeLong, holotype ♀, MEXICO: Coahuila, Saltillo, 23.ix.1941 (*DeLong, Good, Caldwell & Plummer*) (OSU, Columbus).

WEST INDIES: Bermuda, 1 ♀, i. 1896 (*C. M. Weed*), 1 ♀, 3.ii.1968 (*J. C. & K. E. White*). U.S.A.: Florida, Daytona, 4 ♂, 3 ♀, 23.v.1926 (*E. D. Ball*); 4 ♂, 4 ♀, 3.vi.1928 (*E. D. Ball*); F., Cedar Keys, 1 ♂, 5 ♀, 12.vi.1939 (*R. H. Beamer*); F., 'Jax'ville', 2 ♂, 3 ♀, 20.vi.1926, 8.v.1927 (*E. D. Ball*); F., Miami, 3 ♂, 3 ♀, 19.ii.1921; F., Palm Beach, 1 ♂, 1 ♀, 12.xii.1926 (*F. H. Lathrop*); F., Palm Beach, 1 ♂, 1 ♀, 11.xii.1926 (*E. D. Ball*); North Carolina, Southport, 1 ♂, 1 ♀, 28.vii.1919 (*Osborn & Metcalf*); N.C., Carolina Beach, 5 ♀, 13.vii.—; N.C., Carolina Beach, 7 ♂, 5 ♀, 4.vii.1927, 2 ♂, 3.ix.1932 (*Z. P. Metcalf*); N.C., Ft. Fisher, 1 ♀, 8.vii.1957 (*David A. Young*); Virginia, Cobbs Isl., 1 ♀, 27.viii.1889; Louisiana, Cameron, 6 ♂, 5 ♀, 14–28.viii.1903 (*Herbert Osborn*); La., Cameron, 1 ♂, 2 ♀, 17.vi.1948 (*R. H. Beamer*); Mississippi, Biloxi, 1 ♂, 5 ♀, 11.vi.1934 (*D. W. Grimes*); Miss., Fulton, 2 ♀, 15.vi.1933 (*D. W. Grimes*); Miss., Agr. Coll., 1 ♂, 4 ♀, 19.vi.1920 (*H. L. Dozier*); Miss., Agr. Coll., 4 ♂, 2 ♀, 19.vi.1921 (*C. J. Drake*); Miss., Pontotoc, 3 ♂, 14.vi.1934; Miss., Laurel, 1 ♂, 2 ♀, 27.viii.1934 (*H. M. Harris*); Missouri, Louisiana, 11 ♂, 3 ♀, 5.vii.1964 (*W. S. Craig*); Mo., Hollister, 3 ♀, 22.vii.1915 (*H. H. Knight*); Mo., Wellston, 1 ♂, 10.vii.1904 (*C. E. Brown*); 'MO.' 4 ♂; Tennessee, Clarksville, 3 ♂, 3 ♀, 20.viii.1914; Tenn., Clarksville, 2 ♂, 7 ♀, 22.vii.1915; Tenn., Clarksville, 1 ♂, 3 ♀, 15.vii.1939 (*R. H. Beamer*); Illinois, 1 ♂, 1 ♀, 3.vii.1909; 'Md.', 1 ♂; Texas, Aransas Co., 10 ♂, 14 ♀, 6.viii.1928 (*R. H. Beamer & J. G. Shaw*); Tex., Bee Co., 3 ♂, 3 ♀, 25.vii.1928 (*R. H. Beamer*); Tex., Big Bend, 4 ♂, 24.vi.1947 (*R. H. Beamer*); Tex., Boca Chica, 7 ♂, 10 ♀, 30.vi.1938 (*R. H. Beamer*); Tex., Boca Chica, 2 ♀, 30.v.1933 (*Oman*); Tex., Brazoria Co., 1 ♂, 3 ♀, 10.viii.1928 (*R. H. Beamer*); Tex., Brooks Co., 2 ♂, 1 ♀, 25.vi.1928 (*R. H. Beamer*); Tex., Brownsville, 15 ♀, 25.v.1939 (*D. J. & J. N. Knull*); Tex., Brownsville, 6 ♂, 10 ♀, 13.iv.1950 (*R. H. Beamer*); Tex., Brownsville, 6 ♀, 31.v.1933 (*Oman*); Tex., Brownsville, 3 ♂, 1 ♀, 1.v.1904 (*H. S. Barber*); Tex., Brownsville, 1 ♂, 1 ♀, June (*F. H. Snow*); Tex., Cameron Co., 10 ♂, 26 ♀, 3.viii.1928 (*R. H. Beamer*); Tex., Chisos Mts., 3 ♂, 1 ♀, 23.vi.1961 (*D. J. & J. N. Knull*); Tex., Corpus Christi, 2 ♂, 2 ♀, 20.x.1905 (*F. C. Pratt*); Tex., College Station, 4 ♂, 3 ♀, 17.v.1907 (*W. D. Pierce*); Tex., Dallas, 6 ♂, 6 ♀, 18.vi.1906 (*W. D. Pierce*); Tex., Davis Mts., 1 ♂, 4 ♀, 20.ix.1938 (*D. J. & J. N. Knull*); Tex., Harris Co., 9 ♂, 1 ♀, 12.viii.1928 (*R. H. Beamer*); Tex., Harris Co., 25 miles S.E. Harlingen, 4 ♂, 1945 (*D. E. Hardy*); Tex., Houston, 1 ♂, 4 ♀, 4.xi.1932 (*L. D. Tuthill*); Tex., Hunter, 2 ♂, 2 ♀, 24.vi.1914 (*J. D. Mitchell*); Tex., Jackson Co., 2 ♂, 1 ♀, 8.viii.1928 (*R. H. Beamer*); Tex., Laguna Madre, 25 miles S.E. Harlingen, 11 ♂, 6 ♀ (*D. E. Hardy*); Tex., Pt Arthur, 9 ♂, 11 ♀, 28.v.1931 (*C. P. Trotter*); Tex., Texas City, 3 ♂, 1 ♀, 2.xi.1932 (*L. D. Tuthill*). MEXICO: La Pesca, 1 ♂, 17.v.1952 (*M. Cazier, W. Gertsch, R. Schrammel*); Monterrey, 2 ♂, 1 ♀, 11.viii.1936 (*E. D. Ball*); Monterrey, 1 ♂, 22.xi.1932 (*L. D. Tuthill*).

BIOLOGY. Little is known about the biology and hosts of this species. It was reported on *Iva frutescens* (Osborn, 1903) in Florida and on luxuriant vegetation and desert shrubs in Mexico (DeLong, 1945b). Examination of material showed

that it was collected on weeds and grasses in Mississippi, *Solidago* in Tennessee, and *Silphium perfoliatum* in Missouri. It is prevalent from May to October in southern U.S.

REMARKS. *Tinobregmus vittatus* is a variable species with a range of size, colour and head characteristics, which show some evidence of geographical gradations. Populations from the Mississippi Valley are larger, and have more produced crown than populations westward in Texas and Mexico. Colours of the elytra are more uniformly golden-yellow, with typical apical black band in both sexes of populations from the Mississippi Valley. Western and eastern populations of males are pale ivory with apical black band whereas females are uniformly stramineous without the apical black band. The morphological characteristics of the male genitalia among various species described in *Tinobregmus* are identical, thus there is no basis for validating the species that are synonymized under *vittatus*.

Tribe SANDERSELLINI DeLong

Sandersellini DeLong, 1945a : 414. Type-genus: *Sandersellus* DeLong.

Medium size, slender, cixiid-like leafhoppers.

Head elongate, very narrow, length about twice as long as interocular width; crown strongly produced anteriorly beyond proximal margin of eyes, disk strongly carinate laterally and elevated above eyes; pronotum large with 2 lateral carinae on each side and a distinct longitudinal carina medially; scutellum large, median length about equal to median length of pronotum; elytra and hind wings well developed, appendix well developed, venation slightly obscured, outer anteapical cell closed; clypeus long and narrow, lateral margins slightly sinuate, surface depressed slightly subapically; clypellus short, lateral margins nearly parallel, extending distally beyond genae, surface elevated medially; setal arrangement on hind femur 2 : 2 : 1.

Male genitalia symmetrical. Aedeagus and style well developed.

The tribe occurs in the neotropical region. One genus, *Sandersellus* DeLong, is recognized from South America. The combination of characters of one pair of lateral carinae on each side of the pronotum and a median pronotal carina separates Sandersellini from other tribes in the subfamily. The tribe has no close relatives owing to the uniqueness of these characters.

Genus SANDERSELLUS DeLong

(Text-figs 23-63)

Sandersellus DeLong, 1945a : 414. Type-species: *Sandersellus carinatus* DeLong, by original designation and monotypy (DeLong, 1945a : 415).

Cixidocoelidia Linnavuori 1956 : 34. Type-species: *Cixidocoelidia truncatipennis* Linnavuori, by original designation and monotypy (Linnavuori, 1956 : 34). **Syn. n.**

Medium size, elongate leafhoppers.

Colour fuscous throughout with numerous, irregular spots on elytra and small orange circular spots along veins of elytra, irregular markings on surface of crown, pronotum and scutellum. General habitus among all known species of the genus is remarkably similar.

Head much narrower than pronotum; crown strongly produced anteriorly with lateral margins strongly carinate; eyes large, elongate, occupying the greater portion of the head; pronotum bicarinate laterally and unicarinate medially; elytra well developed, broad apically,

appendix well developed, venation as in description of tribe; face long, clypeus and clypellus as in description of tribe.

Male genitalia symmetrical; pygofer in lateral aspect with a distinctive long process on caudal margin, caudal margin bilobed and/or caudodorsal margin produced distally to a narrow lobe; aedeagus articulated basally with connective, long, sinuate or tube-like, with or without accessory processes and teeth on shaft, curved apically in lateral aspect; gonopore ventral and subapical; style well developed, long, narrow, curved laterally, sometimes straight, with or without subapical projection or processes; connective small, broadly Y-shaped without stem; plate long and narrow, sometimes broad medially.

Female seventh sternum with posterior margin slightly produced.

Sandersellus, originally monotypic, is now a polytypic genus with eight species, all remarkably similar in general habitus. The type-species of *Cixidocoelidia* (*C. truncatipennis* Linnavuori, Bogota, Lindig, 'n.g. et n. sp.', '*Cixidocoelidia truncatipennis* n. sp.', 'typus') in the Naturhistoriska Riksmuseum in Stockholm was examined. The type-specimen is a female and was generically associated with a paratype male specimen of *Sandersellus carinatus* DeLong. *C. truncatipennis*, known only from the holotype female, is excluded from the key. The genus is known only from South America.

KEY TO THE SPECIES OF *SANDERSELLUS*

(MALES)

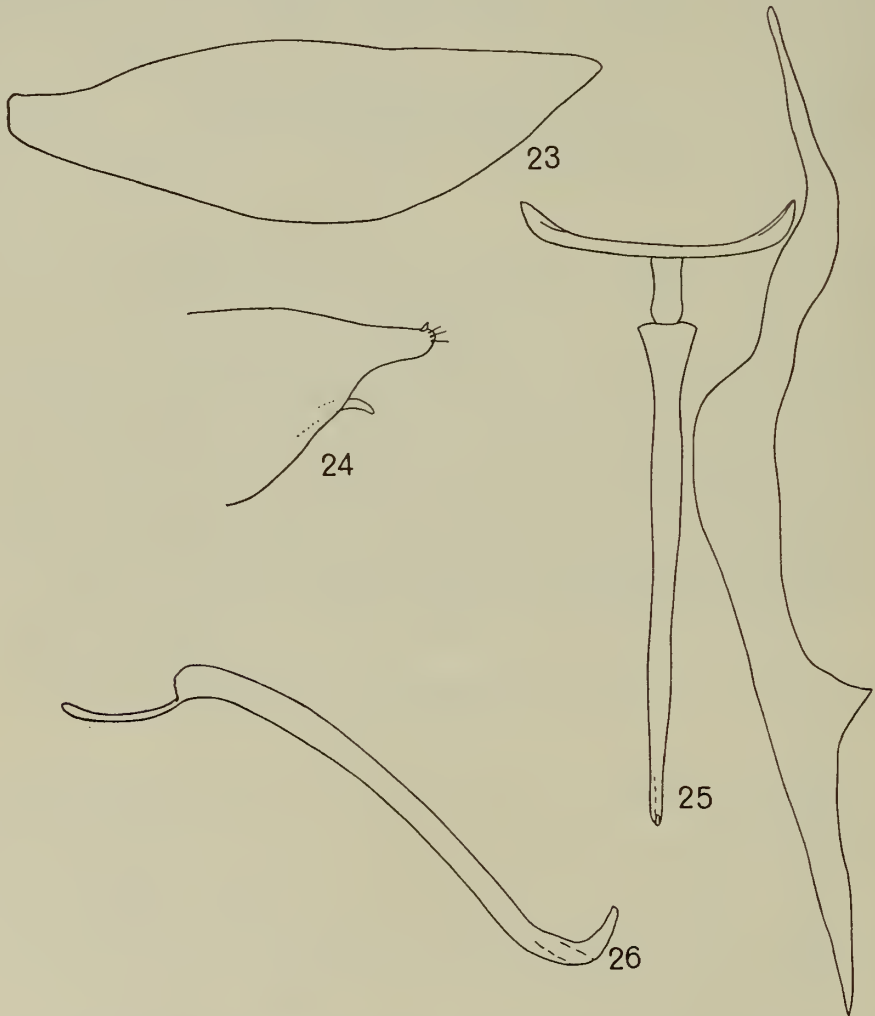
- 1 Pygofer in lateral aspect with caudal margin produced distally to a single caudodorsal lobe, pygofer process arising under or near ventral margin of lobe (Text-figs 24, 27, 33, 39) 2
- Pygofer in lateral aspect with caudal margin bilobed, pygofer process arising between lobes (Text-figs 45, 53, 58) 5
- 2 (1) Aedeagus in lateral aspect with margins of shaft not parallel, shaft broad basally (Text-figs 32, 38, 43); style in dorsal aspect with length slightly exceeding apex of aedeagus (Text-figs 28, 34, 40) 3
- Aedeagus in lateral aspect with margins of shaft parallel throughout (Text-fig. 26); style in dorsal aspect with length greatly exceeding apex of aedeagus (Text-fig. 25) *carinatus* DeLong (p. 22)
- 3 (2) Aedeagus in lateral aspect with barbs or serrations on shaft (Text-figs 38, 43); pygofer in lateral aspect with caudodorsal lobe hooked apically (Text-figs 33, 39) 4
- Aedeagus in lateral aspect without barbs or serrations on shaft (Text-fig. 32); pygofer in lateral aspect with caudodorsal lobe broadly truncate apically (Text-fig. 27) *simplex* sp. n. (p. 23)
- 4 (3) Pygofer process serrate distally (Text-fig. 33); aedeagus in lateral aspect with ventral margin serrate (Text-fig. 38) *delongi* sp. n. (p. 24)
- Pygofer process bluntly pointed apically (Text-fig. 39); aedeagus in lateral aspect with numerous lateral barbs on shaft (Text-fig. 43) *ornatus* sp. n. (p. 26)
- 5 (1) Aedeagus with processes or teeth on shaft (Text-fig. 56); style with irregular shaped teeth or small projections subapically (Text-fig. 59) 6
- Aedeagus without processes or teeth on shaft (Text-fig. 52); style without teeth or projections (Text-fig. 51) *linnavuorii* sp. n. (p. 27)
- 6 (5) Pygofer process short, broad basally with a sharp spine-like projection apically (Text-fig. 53); aedeagus with a pair of broad, toothed processes arising

- dorsally on middle of shaft, curved ventrally, shaft with row of spines laterally (Text-figs 55, 56) **peniculus** sp. n. (p. 27)
- Pygofer process long, lanceolate (Text-fig. 58); aedeagus with pair of broad, sickle-shaped, retrorse processes arising dorsally subapically, shaft without row of spines (Text-figs 62, 63) **retrorsus** sp. n. (p. 29)

***Sandersellus carinatus* DeLong**

(Text-figs 23-26)

Sandersellus carinatus DeLong, 1945a : 415. Holotype ♂ [not ♀, as stated by DeLong], PERU (OSU, Columbus) [examined].



FIGS 23-26. *Sandersellus carinatus* DeLong. 23, plate, ventral view; 24, male pygofer, lateral view; 25, connective, aedeagus and style, dorsal view; 26, aedeagus, lateral view.

Sandersellus carinatus DeLong; DeLong, 1969 : 464. Length: ♂ 7.50 mm, ♀ unknown.

Colour fuscous throughout except for clypeus and clypellus, with prominent irregular ivory spots on elytra and hind wings, veins marked with small circular yellow to orange spots; head, pronotum and scutellum marked with irregular yellow to ochre spots; clypeus and clypellus yellow-ochre except for fuscous markings along lateral margins.

Head much narrower than pronotum, greatest width about two-thirds greatest width of pronotum; crown long and narrow, produced beyond anterior margin of eyes, distal length about one-third entire median length, lateral margins strongly carinate, disk elevated above level of eyes; eyes large, elongate-ovoid, occupying a greater portion of the head dorsally; pronotum large, bicarinate laterally, strongly carinate medially; scutellum large, median length about equal to median length of pronotum; elytra and hind wings well developed, appendix well developed, venation as in generic description.

Pygofer in lateral aspect with a short finger-like process arising about middle of caudal margin, caudodorsal margin produced distally to a broad truncate lobe; aedeagus tube-like, broadly sinuate in lateral aspect, curved distally; gonopore subterminal, exiting ventrally; style in dorsal view large, curved slightly laterally with a prominent lateral projection subapically; connective as in generic description; plate long, broad medially.

DISTRIBUTION. Peru.

SPECIMENS EXAMINED.

Sandersellus carinatus DeLong, holotype ♂, PERU: Sinchona, vii.1944 (*J. G. Saunders*) (OSU, Columbus). DeLong's (1969 : 465, figs 4a, 4b, 4c) illustrations of '*Sandersellus carinatus* DeLong' were based on a paratype specimen, which I have described herein as *retrorsus* sp. n.

The type-series of *carinatus* is mixed. Two paratype males are each described as new species in this paper.

BIOLOGY. Unknown.

REMARKS. *Sandersellus carinatus* has a distinctive narrow, tube-like aedeagus which can distinguish the species from all others known in the genus.

Sandersellus simplex sp. n.

(Text-figs 27-32)

Length: ♂ 7.50 mm, ♀ unknown.

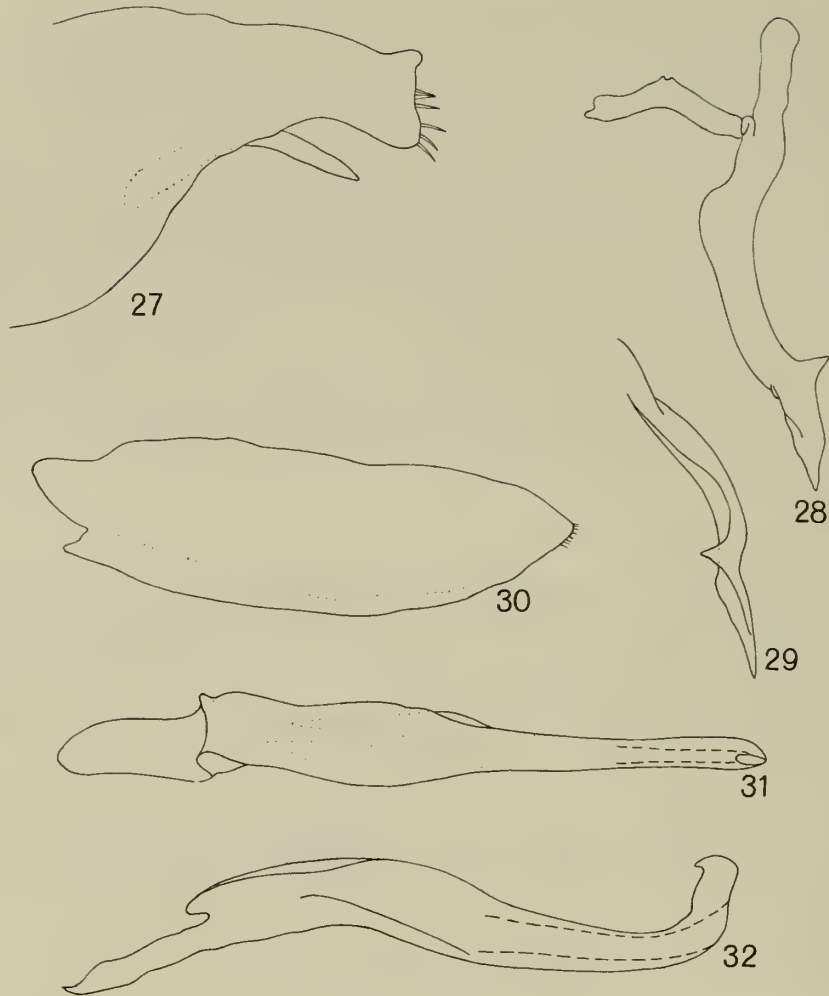
General habitus as in *carinatus*.

Pygofer in lateral aspect with curved finger-like process arising above middle of caudal margin, caudodorsal margin produced distally to a broad truncate lobe similar to *carinatus*; aedeagus broadly sinuate in lateral aspect, curved distally, shaft without barbs, processes or serrations, broad at basal half becoming attenuated apically in dorsal and lateral aspects; gonopore subapical, exiting ventrally; style in dorsal aspect long, curved laterally with a prominent lateral projection subapically; connective as in generic description; plate as in *carinatus*.

SPECIMEN EXAMINED.

Holotype ♂, PERU: Monson Valley, Tingo Maria, 9.xii.1954 (*E. I. Schlinger & E. S. Ross*) (CAS, San Francisco).

BIOLOGY. Unknown.



FIGS 27-32. *Sandersellus simplex* sp. n. 27, male pygofer, lateral view; 28, style and connective, dorsal view; 29, apex of style, lateral view; 30, plate, ventral view; 31, aedeagus, dorsal view; 32, aedeagus, lateral view.

REMARKS. This species, related to *ornatus* in aedeagal characters, can be separated from the latter by the truncate caudodorsal lobe of the pygofer and the simple unadorned aedeagus.

***Sandersellus delongi* sp. n.**

(Text-figs 33-38)

Length: ♂ 6.90 mm, ♀ unknown.

General habitus as in *carinatus*.

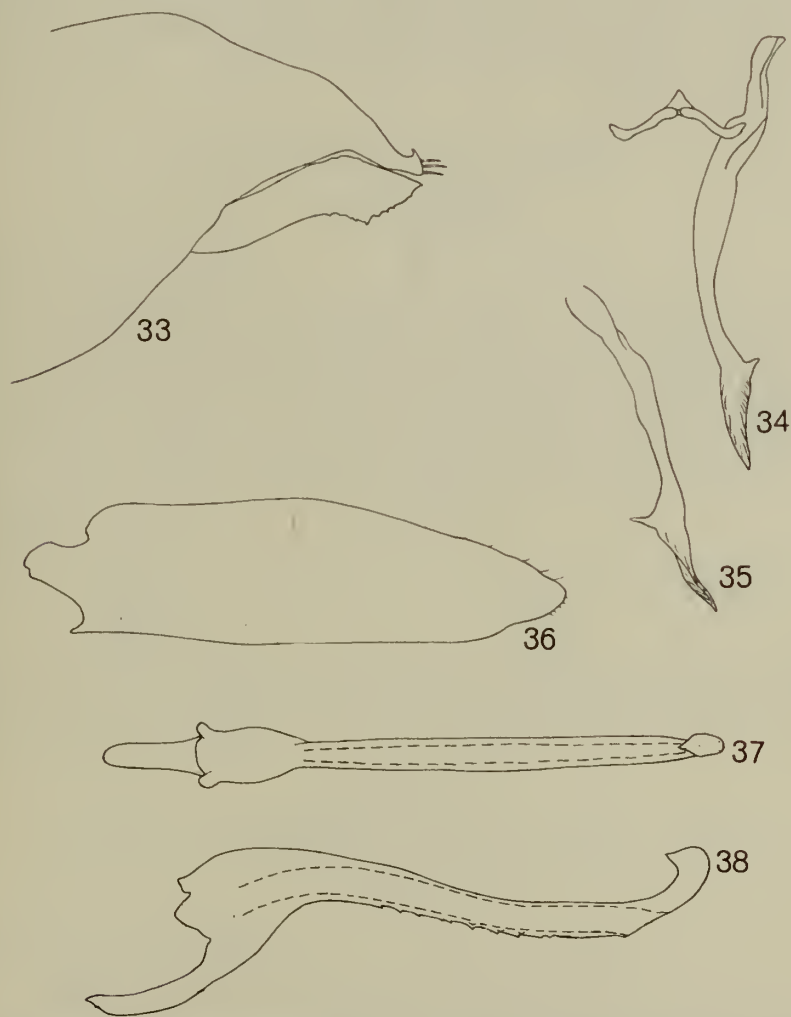
Pygofer in lateral aspect with prominent, broad, curved process, serrated distally, arising above middle of caudal margin, caudodorsal margin produced distally to a narrow hook-like

lobe; aedeagus broadly sinuate in lateral aspect, curved distally, broad basally, ventral margin distinctly serrated; gonopore subterminal, exiting ventrally; style in dorsal aspect long, curved laterally with a lateral lobe or projection subapically, rugose apically; connective as in generic description; plate broad, narrowed slightly at apex.

SPECIMEN EXAMINED.

Holotype ♂ (paratype ♂ of *Sandersellus carinatus* DeLong), BOLIVIA: C. Esperanza, Bemi (*Wm. M. Mana*), Mulford Bio. Exped. 1921-22 (USNM, Washington).

This species is named for Dr Dwight M. DeLong, world renowned homopterist at Ohio State University.



FIGS 33-38. *Sandersellus delongi* sp. n. 33, male pygofer, lateral view; 34, style and connective, dorsal view; 35, apex of style, lateral view; 36, plate, ventral view; 37, aedeagus, dorsal view; 38, aedeagus, lateral view.

BIOLOGY. Unknown.

REMARKS. *Sandersellus delongi* is most closely related to *ornatus* but can be separated from the latter by the broad, apically serrated pygofer process.

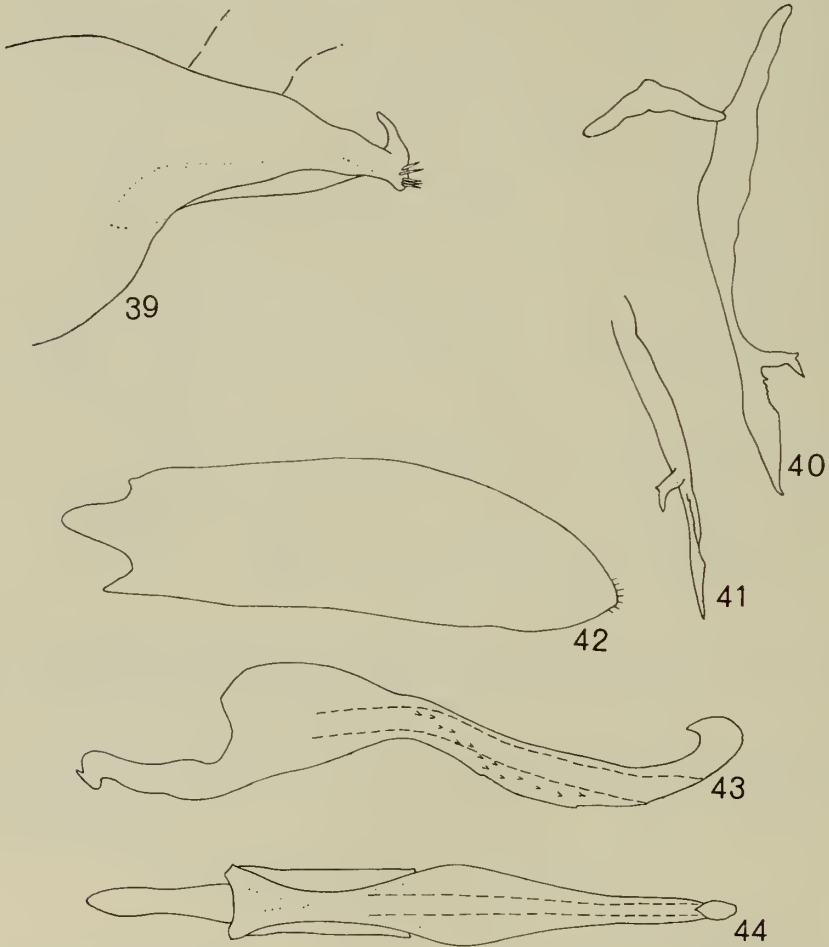
***Sandersellus ornatus* sp. n.**

(Text-figs 39-44)

Length: ♂ 6.50 mm, ♀ unknown.

General habitus similar to other described species of *Sandersellus*.

Pygofer in lateral aspect with a broad lanceolate process arising above middle of caudal margin, caudodorsal margin produced distally to a narrow hooked lobe; aedeagus slightly



FIGS 39-44. *Sandersellus ornatus* sp. n. 39, male pygofer, lateral view; 40, style and connective, dorsal view; 41, apex of style, dorsal view; 42, plate, ventral view; 43, aedeagus, lateral view; 44, aedeagus, dorsal view.

sinuate in lateral aspect, curved distally with numerous barbs laterally on shaft, ventral margin coarsely serrate, shaft broad basally and slightly constricted medially in lateral aspect, bulbous medially in dorsal aspect; gonopore subapical, exiting ventrally; style in dorsal aspect long, curved laterally, with an ornate or toothed lateral projection subapically; connective as in generic description; plate as in *carinatus*.

SPECIMEN EXAMINED.

Holotype ♂, PERU: Yurac., 67 miles E. of Tingo Maria, 350 m, 4.x.1954 (*E. I. Schlinger & E. S. Ross*) (CAS, San Francisco).

BIOLOGY. Unknown.

REMARKS. *Sandersellus ornatus* can be separated from other related species by the hooked lobe on the caudodorsal margin of the pygofer and the presence of barbs or spicules on the lateral margins of the aedeagus.

***Sandersellus linnavuorii* sp. n.**

(Text-figs 45-52)

Length: ♂ 7.00 mm, ♀ unknown.

General habitus as in *carinatus*.

Pygofer in lateral aspect with caudal margin bilobed, caudoventral lobe short, rounded apically, caudodorsal lobe long, broad basally, narrow apically, caudal margin with a long process reaching apex of caudodorsal lobe, narrowed at basal half, expanded subapically, abruptly pointed apically and with a small projection subapically on dorsal margin; aedeagus in lateral aspect slightly curved, shaft narrow throughout as in *carinatus*, compressed laterally, without processes or teeth on shaft; style long, extending beyond apex of aedeagus, apical two-thirds straight, lanceolate, sharply pointed apically, without lateral teeth or projections; connective as in generic description; plate narrow as in *peniculus*.

SPECIMEN EXAMINED.

Holotype ♂, BOLIVIA: S. Antonio (*O. Garlepp*) (NR, Stockholm).

BIOLOGY. Unknown.

REMARKS. From *carinatus*, to which it is similar in aedeagal characteristics, *linnavuorii* can be separated by the long apical lanceolate style and the bilobed caudal margin of the pygofer.

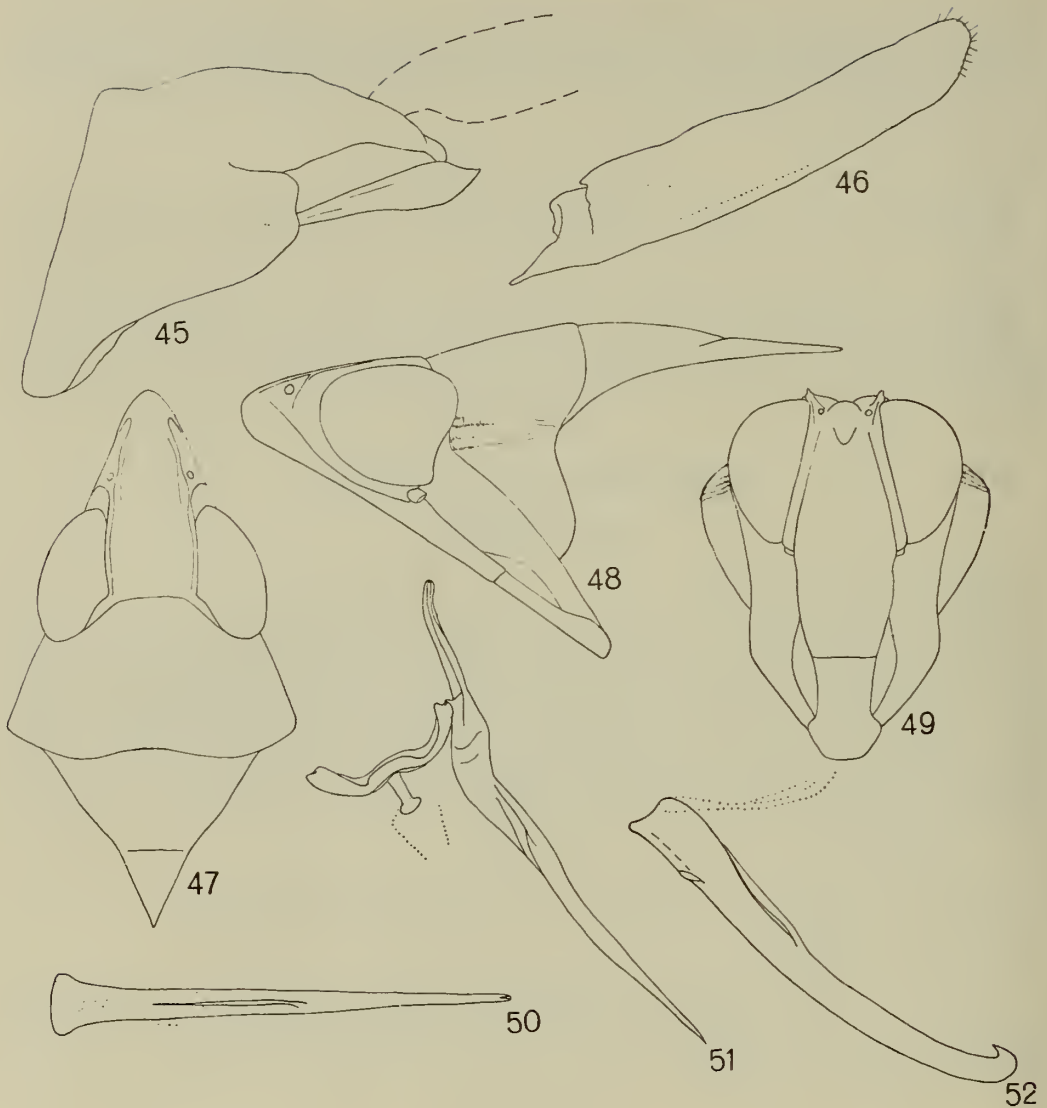
***Sandersellus peniculus* sp. n.**

(Text-figs 53-57)

Length: ♂ 7.00 mm, ♀ unknown.

General habitus as in *carinatus*.

Pygofer in lateral aspect with caudal margin bilobed, caudoventral lobe short, rounded apically, caudodorsal lobe long, broad basally, narrow apically, caudal margin with a short broad process, terminating to a sharp spine-like projection; aedeagus in lateral aspect broadly sinuate, curved apically, shaft with a row of teeth along middle of lateral margin and a pair of broad toothed processes arising dorsally on middle of shaft and projecting basally, curved ventrally at apical half; style in dorsal aspect long, extending beyond apex of aedeagus, basal

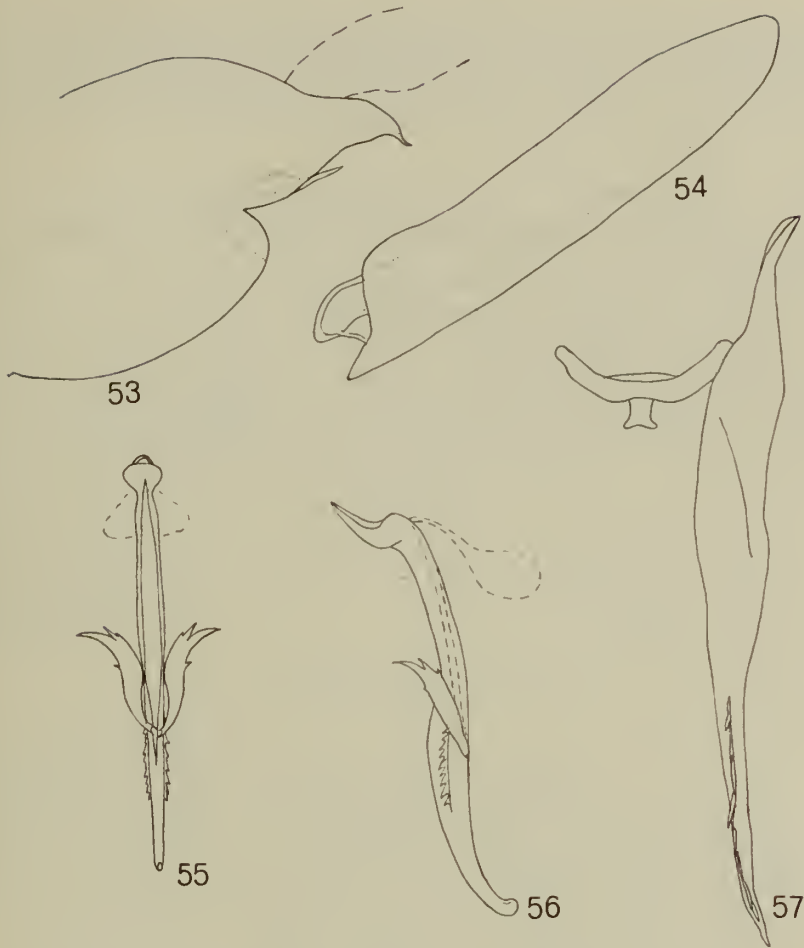


FIGS 45-52. *Sandersellus linnavuorii* sp. n. 45, male pygofer, lateral view; 46, plate, ventral view; 47, head, pronotum and scutellum, dorsal view; 48, head, pronotum, and scutellum, lateral view; 49, face; 50, aedeagus, dorsal view; 51, connective and style, dorsal view; 52, aedeagus, lateral view.

two-thirds broad, apical one-third very narrow with a row of irregular shaped teeth dorsally; connective as in generic description; plate narrow.

SPECIMEN EXAMINED.

Holotype ♂, PERU: Hacienda Maria, Cusco, along R. Cosnipata, tropical jungle, 900 m a.s.l., 12.iii.1952 (*K. L. Woytkowski*) (NCSU, Raleigh).



FIGS 53-57. *Sandersellus peniculus* sp. n. 53, male pygofer, lateral view; 54, plate, ventral view; 55, aedeagus, dorsal view; 56, aedeagus, lateral view; 57, style and connective, dorsal view.

BIOLOGY. Unknown.

REMARKS. *C. peniculus* is similar to *retrorsus* in aedeagal characteristics but can be separated from the latter by the shape of pygofer process and long row of irregular teeth on apical portion of the style.

***Sandersellus retrorsus* sp. n.**

(Text-figs 58-63)

Length: ♂ 7.00 mm, ♀ unknown.

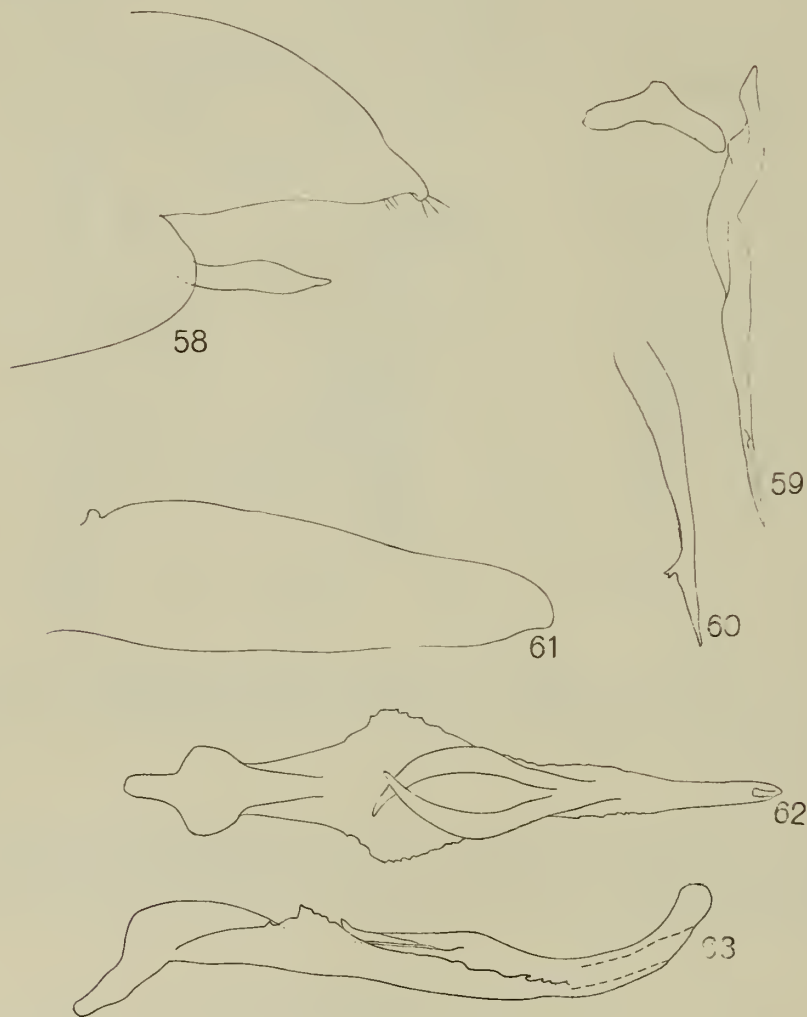
General habitus similar to other described species of *Sandersellus*.

Pygofer in lateral aspect with caudal margin bilobed, caudoventral lobe short, rounded

apically, caudodorsal lobe long, broad basally, narrowed distally, caudal margin with a curved, almost sickle-shaped process; aedeagus broadly sinuate in lateral aspect, curved distally, shaft in dorsal aspect with broad, serrated lateral flange medially and a pair of retrorse, sickle-shaped dorsal processes arising distad of flange; gonopore subapical, exiting ventrally; style in dorsal aspect long, narrowed apically with small projection subapically; connective as in generic description; plate similar to *carinatus*.

SPECIMENS EXAMINED.

Holotype ♂ (paratype ♂ of *Sandersellus carinatus* DeLong), BOLIVIA: Coroico (OSU, Columbus).



FIGS 58-63. *Sandersellus retrorsus* sp. n. 58, male pygofer, lateral view; 59, style and connective, dorsal view; 60, apex of style, lateral view; 61, plate, ventral view; 62, aedeagus, dorsal view; 63, aedeagus, lateral view.

BIOLOGY. Unknown.

REMARKS. This species is easily distinguishable from other species of *Sandersellus* by the prominent lateral flanges and two retrorse processes on the shaft of the aedeagus.

Sandersellus truncatipennis (Linnavuori) **comb. n.**

Cixidoceolidia truncatipennis Linnavuori, 1956 : 34. Holotype ♀, BOLIVIA (NR, Stockholm).

This species, which is known only from the holotype ♀, has been adequately described by Linnavuori (1956). The general habitus is similar to all known species of *Sandersellus*. Comparison of the type of *truncatipennis* from Bolivia with my own material failed to associate the sex, even with the male holotypes of *delongi* and *retrorsus*, also from Bolivia. On this basis I am considering *truncatipennis* a distinct species until such time as additional material from Bolivia is studied.

DISTRIBUTION. Colombia (Linnavuori, 1956).

SPECIMEN EXAMINED.

Cixidoceolidia truncatipennis Linnavuori, holotype ♀, BOLIVIA: Bogota (*Lindig*) (NR, Stockholm).

Tribe **THARRINI trib. n.**

Type-genus: *Tharra* Kirkaldy.

Small to medium size, slender, almost asiracine-like leafhoppers.

Colour uniform to highly marked, sexual dimorphism evident.

Head generally elongated; crown with anterior margin almost always produced distally beyond anterior margin of eyes, disk elevated above eyes, sometimes depressed medially, ocelli prominent; eyes elongate-ovoid; pronotum with surface finely knobbed; scutellum large; elytra long, broad apically, appendix well developed, venation usually prominent, outer anteapical cell closed, middle and inner anteapical cells opened basally, five apical cells with sides nearly parallel; clypeus long, broad anteriorly, excised near antennal sockets, tapered apically, surface finely granulate, median longitudinal carina usually absent; clypellus long; setal arrangement on hind femur 2 : 2 : 1.

Male genitalia symmetrical; pygofer narrowed longitudinally; aedeagus bipendulate; plate segmented, laterally appressed, often elliptical, sometimes subquadrate, profusely setose.

The distribution of the new tribe is primarily Oceania with southern and western extremities of its range reaching northern Australia and Malaysia, respectively. One species has been recorded from the Ethiopian region but this record is dubious. There are three genera known in the group.

KEY TO THE GENERA OF THARRINI

- 1 Aedeagus bipendulate, ventral appendage traversed by gonoduct (Text-figs 77, 86) 2
- Aedeagus unipendulate, traversed by gonoduct (Text-fig. 71)

NEOTHARRA gen. n. (p. 32)

- 2 (1) Aedeagus with or without long processes, if present, on dorsal appendage only.
 never on ventral appendage (Text-figs 103, 141, 147) **THARRA** Kirkaldy (p. 34)
 - Aedeagus with long processes on ventral appendage, never on dorsal appendage
 (Text-fig. 512) **HARANTHUS** gen. n. (p. 191)

Genus **NEOTHARRA** gen. n.

(Text-figs 64-72)

Type-species: *Neotharra ventrospiculata* sp. n.

Small, slender leafhoppers. Similar in general habitus to *Tharra*. Colour fuscous with ochre along middle of commissural line and costa of elytra; scutellum ochreous.

Head narrower than pronotum; crown produced distally beyond proximal margin of eyes, somewhat declivous anteriorly, broad apically, tapered basally, disk elevated above eyes; ocelli small, near lateral margin of crown; eyes medium size, occupying about half the total dorsal area of head; pronotum long, median length about as long as median length of head, lateral carina dorsad of costal margin of elytra, surface minutely knobbed; scutellum large, length exceeding median length of pronotum; elytra well developed, venation prominent, outer anteapical cell large, about one-half length of middle anteapical cell, five long apical cells; hind wings well developed; clypeus long, constricted medially; clypellus short, lateral margins expanded apically.

Male genitalia symmetrical; pygofer small with prominent process on caudoventral margin; aedeagus a single appendage traversed by gonoduct and with small spines on shaft, articulated basally with connective; gonopore terminal; style small, apex clawed; plate segmented sub-basally, very narrow basally, broadly expanded at apical three-fourths.

Female seventh sternum about twice length of penultimate segment, posterior margin produced distally along middle.

Neotharra is a monotypic genus and is closely related to *Tharra* in general habitus and genitalic characteristics. The former can be easily distinguished from the latter genus by the unipendulate aedeagus and the crown which is declivous anteriorly. It is presently known from New Guinea.

Neotharra ventrospiculata sp. n.

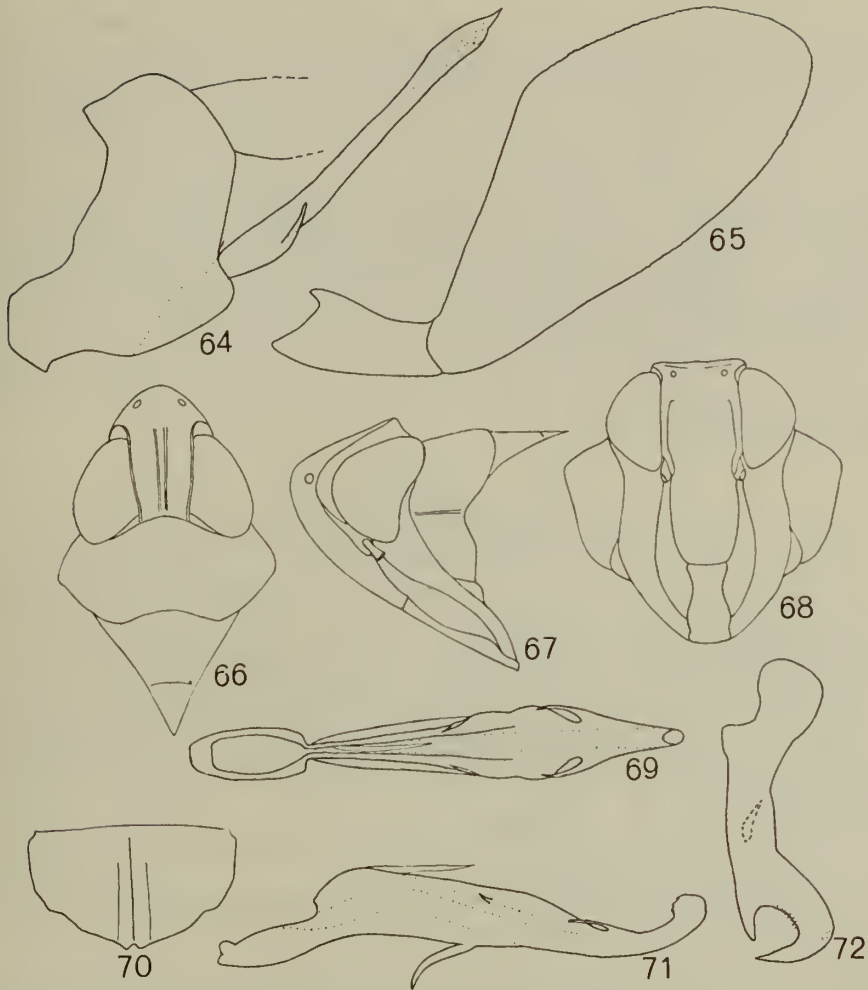
(Text-figs 64-72)

Length: ♂ 5.00-5.20 mm, ♀ 5.50-5.80 mm.

Colour generally fuscous. Crown marked with fuscous band anteriorly and posteriorly, interconnected by longitudinal fuscous line medially; eyes fuscous to deep ochre; pronotum with ochreous band along anterior margin, fuscous below; scutellum ochreous; elytra fuscous except for narrow fused ochreous band along commissural line and middle of costal margin; face and venter light ochre.

Head with anterior margin of crown declivous; crown produced beyond anterior margin of eyes, striate radially, slightly carinate laterally, disk elevated above eyes; pronotum with median length equal to median length of crown; scutellum large, median length greater than median length of pronotum; clypeus long, broad basally, tapered apically, constricted near antennal sockets, surface finely granulose; striate along anterior margin; clypellus long, lateral margins expanded apically.

Male pygofer in lateral aspect with very long process arising from caudoventral margin, pygofer process lanceolate, extending beyond dorsal margin of pygofer with small spine subbasally; aedeagus in lateral aspect a single appendage with a prominent ventral curved



FIGS 64-72. *Neotharra ventrospiculata* sp. n. 64, male pygofer, lateral view; 65, plate, lateral view; 66, head, pronotum and scutellum, dorsal view; 67, head, pronotum and scutellum, lateral view; 68, face; 69, aedeagus, dorsal view; 70, female seventh sternum, ventral view; 71, aedeagus, lateral view; 72, style, lateral view.

spine medially, projecting anteroventrally, a long very membranous dorsal spine basally projecting distally, two smaller dorsal spines subapically, projecting anteriorly and a small lateral spine on middle of each side of shaft, projecting anteriorly, shaft curved apically; gonopore terminal; style small, claw-shaped apically; plate long, narrowed subapically, very broad medially.

Female seventh sternum with anterior margin produced medially.

SPECIMENS EXAMINED.

Holotype ♂, NEW GUINEA: Waris, S. of Hollandia, 450-500 m, 24-31.viii.1959 (T. C. Maa) (BPBM, Honolulu).

Paratypes. NEW GUINEA: allotype ♀, same data as holotype (BPBM, Honolulu); 6 ♂, same data as holotype; Vogelkop, Bomberi, 700–900 m, 4 ♂, 1 ♀, 4–7.v.1959 (*T. C. Maa*); Fak Fak, S. coast of Bomberi, 100–700 m, 1 ♀, 4.v.1959 (*T. C. Maa*); Ifar, Cyclops Mts, 300–500 m, 1 ♀, 23–25.vi.1962 (*J. Sedlacek*) (BPBM, Honolulu); 1 ♂, same data as holotype (USNM, Washington); Vogelkop, Bomberi, 700–900 m, 1 ♂, 6.vi.1959 (*T. C. Maa*) (BMNH, London); 1 ♂, same data as holotype; Vogelkop, Bomberi, 700–900 m, 1 ♂, 1 ♀, 6.vi.1959 (*T. C. Maa*), in author's collection.

BIOLOGY. Information on data labels indicates that this species is prevalent from June to August at elevations ranging from 100 to 900 metres. No host or other biological information is known.

REMARKS. The species *ventrospiculata* is the only known member of the genus, which can be separated generically from *Tharra*, its nearest relative, by the single-appendaged aedeagus.

Genus *THARRA* Kirkaldy

(Text-figs 73–509)

Tharra Kirkaldy, 1906 : 324. Type-species: *Tharra labena* Kirkaldy, by original designation and monotypy (Kirkaldy, 1906 : 324).

Muirella Kirkaldy, 1907 : 79. Type-species: *Muirella oxyomma* Kirkaldy, by original designation and monotypy (Kirkaldy, 1907 : 79). **Syn. n.**

Jassoidula Osborn, 1934a : 182. Type species: *Jassoidula straminea* Osborn, by original designation (Osborn, 1934a : 182). **Syn. n.**

Nisitra Walker, 1870 : 327. Type-species: *Nisitra telifera* Walker [= *Tharra tiarata* (Stål)], by original designation and monotypy (Walker, 1870 : 327). [Homonym of *Nisitra* Walker, 1869 (Metcalf, 1952 : 229).] **Syn. n.**

Nisitrana Metcalf, 1952 : 229. [Replacement name for *Nisitra* Walker 1870.] **Syn. n.**

Small to medium size elongate leafhoppers.

Colour variable from general fuscous to general pale yellow, frequently marked. Sexual dimorphism evident in many species with coloration highly marked in females, nondescript in males.

Head variable in form, narrower than pronotum; crown produced considerably beyond to nearly even with anterior margin of eyes, lateral margins parallel or convergent, strongly carinate or not, disk even to or elevated above eyes, often depressed medially or on each side of middle, surface striate radially from apex; ocelli near anterior margin of crown, size and position variable interspecifically; eyes medium size, occupying little over half to less than half of total dorsal area of head; pronotum with median length about equal to median length of head except in long headed species, lateral carina dorsad of costal margin of elytra; scutellum large, median length greater than median length of pronotum; elytra long, narrow basally, expanded apically, appendix well developed, size variable interspecifically, venation obscure to prominent; hind wings well developed; clypeus long, broad anteriorly, narrowed posteriorly, usually constricted medially, median longitudinal carina usually absent, present in a few species, sometimes partially complete in both sexes or in female only, surface finely granulose, several to many rugulose striations along anterior margin below crown; clypellus long, lateral margins parallel or expanded apically, flat to swollen longitudinally.

Male genitalia symmetrical, well developed; pygofer broad dorsoventrally with a conspicuous process arising from middle of caudal margin or caudoventrally, process variable in size, length, and form interspecifically, sometimes with accessory processes; aedeagus bipendulate with fusion basally, articulated basally to apex of connective; dorsal appendage broad, often with

processes or spines; ventral appendage very slender, tube-like, traversed by gonoduct; gonopore terminal; connective Y-shaped, arms broad; style small, often clawed apically; plate variable interspecifically, long to subquadrate, often with long, numerous, very fine setae submarginally.

Female seventh sternum simple with anterior margin nearly truncate or produced distally along middle.

Tharra is a very large genus with evidence of specialization among the long-headed forms. Speciation is also recognized and may be more prolific than realized from the present study of the group. The genus is widespread throughout the Oriental region which includes Micronesia, Philippines, Malaysia and Indonesia. The genus is easily distinguished from *Neotharra* by the bispindulate aedeagus.

KEY TO THE SPECIES OF *THARRA*

(MALES)

- 1 Head strongly produced anteriorly, crown distad of proximal margin of eyes nearly one-half to over half entire median length, apex sharply conical (Text-figs 75, 84, 504, 507) 2
- Head not strongly produced anteriorly, crown distad of proximal margin of eyes always less than one-half entire median length, apex bluntly conical or rounded (Text-figs 93, 100, 113) 4
- 2 (1) Pygofer in lateral aspect with long process arising from caudoventral margin (Text-fig. 79); aedeagus without spines (Text-figs 86, 90) 3
- Pygofer in lateral aspect with very short process arising from middle of caudal margin (Text-fig. 73); aedeagus with spines (Text-figs 76, 77) *tiarata* (Stål) (p. 41)
- 3 (2) Pygofer in lateral aspect with flat, blade-like process, terminating to short finger-like lobe (Text-fig. 79); plate with terminal segment subquadrate (Text-fig. 81) *frontalis* sp. n. (p. 42)
- Pygofer in lateral aspect with process not blade-like, curved, constricted medially and enlarged subapically, slightly twisted apically, with terminal finger-like lobe (Text-fig. 88); plate with terminal segment elongate (Text-fig. 89) *flamma* sp. n. (p. 44)
- 4 (1) Scutellum large, median length greater than or nearly equal to median length of pronotum (Text-fig. 84) 5
- Scutellum small, median length always less than median length of pronotum (Text-fig. 93) *nitida* sp. n. (p. 45)
- 5 (4) Clypeus with prominent median longitudinal carina extending basad of antennal fossa 6
- Clypeus without median longitudinal carina, if present, very weak and partially visible, extending to antennal fossa 10
- 6 (5) Pygofer process with basal or accessory processes (Text-figs 98, 106); aedeagus with row of teeth on ventral margin of dorsal appendage (Text-figs 103, 110) 7
- Pygofer process without secondary processes (Text-figs 111, 119, 124); aedeagus without teeth (Text-figs 116, 121, 126) 8
- 7 (6) Pygofer process short, sclerotized, with a very long secondary filamentous process (Text-fig. 98) *rufivena* (Walker) (p. 47)
- Pygofer process long with single large subbasal process and several sharp toothed processes or serrations on distal half (Text-fig. 106) *papuaensis* sp. n. (p. 49)

- 8 (6) Small, slender species, length less than 5 mm; clypeus with short median longitudinal carina, terminating near antennal fossa; style not clawed apically (Text-figs 123, 128); plate bulbous apically (Text-figs 120, 125) 9
 Medium size species, length over 5 mm; clypeus with long median longitudinal carina, reaching nearly to transclypeal sulcus; style clawed apically (Text-fig. 118); plate nearly elliptical (Text-fig. 112) *maculiceps* (Walker) (p. 50)
- 9 (8) Pygofer process with fine diagonal striations apically (Text-fig. 119); dorsal appendage of aedeagus with short, sharp, lateral apical processes (Text-figs 121, 122) *knighti* sp. n. (p. 53)
 - Pygofer process with longitudinal striations apically, apex appearing segmented (Text-fig. 124); dorsal appendage of aedeagus with subapical ventral flange (Text-figs 126, 127) *ventriosa* sp. n. (p. 55)
- 10 (5) Pygofer process with secondary processes or appendages (Text-figs 129, 134) 11
 - Pygofer process single, without secondary processes or appendages (Text-figs 159, 164) 16
- 11 (10) Aedeagus with spines or processes on dorsal appendage (Text-figs 136, 141, 146); plate with terminal segment elongate (Text-figs 135, 140) 12
 - Aedeagus without spines or processes (Text-fig. 131); plate with terminal segment quadrate (Text-fig. 130) *picta* (Montrouzier) (p. 56)
- 12 (11) Pygofer process with single subbasal or apical secondary appendage (Text-figs 139, 149) 13
 - Pygofer process with two secondary appendages (Text-fig. 134) *spinulata* sp. n. (p. 58)
- 13 (12) Pygofer process with subbasal appendage (Text-figs 139, 144) 14
 Pygofer process with subapical appendage (Text-figs 149, 154) 15
- 14 (13) Aedeagus with one pair of spines, spines subapical on dorsal margin of dorsal appendage (Text-figs 141, 142) *bicladus* sp. n. (p. 60)
 - Aedeagus with two pairs of spines and a prominent lateral flange, spines lateral and dorsal on dorsal appendage (Text-figs 146, 147) *bicornipes* sp. n. (p. 61)
- 15 (13) Aedeagus with one pair of lateral subapical spines and a lateral row of short teeth apically on dorsal appendage (Text-figs 151, 152) *insoluta* sp. n. (p. 62)
 - Aedeagus with two pairs of lateral spines, one pair subapical, the other subbasal on dorsal appendage (Text-figs 156, 158) *arca* sp. n. (p. 64)
- 16 (10) Aedeagus with spines or flanges (Text-figs 161, 203) 17
 - Aedeagus without spines or flanges (Text-figs 316, 321) 47
- 17 (16) Aedeagus with a flange only on dorsal or ventral appendage (Text-figs 166, 171) 18
 - Aedeagus with spines only or with spines and flanges on dorsal or ventral appendages, or on stem of aedeagus (Text-figs 203, 246, 296) 24
- 18 (17) Plate with distal segment subquadrate (Text-fig. 160) 19
 - Plate with distal segment elongate (Text-fig. 170) 20
- 19 (18) Aedeagus with ventral appendage needle-like, dorsal appendage with lateral apical flange (Text-fig. 161) *solomonensis* sp. n. (p. 66)
 - Aedeagus with ventral appendage tube-like, dorsal appendage with dorsal, basal, semicircular flange (Text-fig. 166) *robusta* sp. n. (p. 68)
- 20 (18) Aedeagus with flange on dorsal appendage (Text-fig. 176) 21
 - Aedeagus with flange on ventral appendage, flange keeled (Text-fig. 171) *doni* sp. n. (p. 70)
- 21 (20) Dorsal appendage of aedeagus narrowed apically in lateral aspect, flange lateral and subapical (Text-figs 187, 192) 22
 - Dorsal appendage of aedeagus very broad apically in lateral aspect, flange ventral and subbasal (Text-fig. 176) *grandis* sp. n. (p. 71)
- 22 (21) Pygofer process sharply attenuated apically (Text-figs 184, 189) 23
 - Pygofer process aperturized apically (Text-fig. 179) *vesca* sp. n. (p. 73)

23 (22)	Pygofer process with minute spicules; dorsal appendage of aedeagus with spicules laterally and flange serrate apically (Text-figs 186, 187)	
-	Pygofer process without spicules; dorsal appendage of aedeagus without spicules, flange truncate distally (Text-fig. 192)	<i>labena</i> Kirkaldy (p. 74)
24 (17)	Aedeagus with one pair of spines on dorsal appendage (Text-fig. 197)	<i>kraussi</i> sp. n. (p. 76)
-	Aedeagus with one or more pair of spines and serrations or flange on dorsal or ventral appendage (Text-figs 253, 256, 276)	
25 (24)	Dorsal appendage of aedeagus with spines projecting distally (Text-fig. 197)	25
-	Dorsal appendage of aedeagus with spines projecting basally (Text-fig. 211)	26
26 (25)	Aedeagus with spines large, arising subapically (Text-fig. 202)	27
-	Aedeagus with spines minute, arising subbasally (Text-fig. 197)	<i>nakatai</i> sp. n. (p. 78)
27 (26)	Pygofer process very large and broad; spines arising from dorsal margin of dorsal appendage of aedeagus (Text-figs 202, 203)	<i>permagna</i> sp. n. (p. 79)
-	Pygofer process long and narrow; spines arising from lateral margin of dorsal appendage of aedeagus (Text-figs 207, 208)	<i>bidentis</i> sp. n. (p. 81)
28 (25)	Dorsal appendage of aedeagus with spines arising dorsally or laterally (Text-figs 217, 221)	29
-	Dorsal appendage of aedeagus with spines arising ventrally (Text-figs 211, 212)	<i>perbrevis</i> sp. n. (p. 82)
29 (28)	Pygofer process with serrations on lateral margin or large flange subapically (Text-figs 214, 219)	30
-	Pygofer process without serrations or flange (Text-figs 224, 229)	31
30 (29)	Pygofer process with large flange subapically (Text-fig. 214); ventral appendage of aedeagus tube-like (Text-fig. 217)	<i>forissa</i> sp. n. (p. 84)
-	Pygofer process with serration on lateral margin (Text-fig. 219); ventral appendage of aedeagus broad basally, constricted medially, and enlarged apically (Text-fig. 221)	<i>serrata</i> sp. n. (p. 85)
31 (29)	Pygofer process long and narrow, often curved conspicuously (Text-fig. 234)	32
-	Pygofer process very broad, nearly straight, twisted (Text-fig. 224)	<i>asolita</i> sp. n. (p. 87)
32 (31)	Dorsal appendage of aedeagus with a pair of short lateral or dorsal spines (Text-figs 241, 246)	33
-	Dorsal appendage of aedeagus with a pair of long curved spines (Text-figs 231, 232)	<i>leai</i> Evans (p. 87)
33 (32)	Pygofer process strongly curved to a right angle subbasally (Text-figs 239, 244)	34
-	Pygofer process nearly straight or slightly curved (Text-fig. 234)	<i>costata</i> sp. n. (p. 90)
34 (33)	Dorsal appendage of aedeagus with short broad spine arising subdorsally (Text-fig. 241); plate elongate (Text-fig. 240)	<i>turrita</i> sp. n. (p. 92)
-	Dorsal appendage of aedeagus with short narrow spine arising dorsally (Text-fig. 246); plate enlarged medially (Text-fig. 245)	<i>bispiculata</i> sp. n. (p. 93)
35 (24)	Dorsal appendage of aedeagus with teeth on ventral margin (Text-figs 253, 256)	36
-	Dorsal appendage of aedeagus without teeth on ventral margin (Text-figs 291, 296)	43
36 (35)	Pygofer process long, very slender (Text-figs 254, 259); dorsal appendage of aedeagus with several toothed spines on ventral margin (Text-figs 256, 262)	37
-	Pygofer process large, very broad (Text-fig. 249); dorsal appendage of aedeagus with many hair-like spines on ventral margin (Text-fig. 253)	<i>villosa</i> sp. n. (p. 95)
37 (36)	Aedeagus in lateral aspect with width of ventral appendage much narrower than apex of dorsal appendage (Text-figs 256, 262)	38

- Aedeagus in lateral aspect with width of ventral appendage much wider than apex of dorsal appendage (Text-fig. 271) 40
- 38 (37) Aedeagus in lateral aspect with spines on ventral margin of dorsal appendage (Text-figs. 262, 266) 39
- Aedeagus in lateral aspect with spines on ventral margin of dorsal appendage and dorsal margin of ventral appendage (Text-fig. 256)
aurulenta (Walker) (p. 96)
- 39 (38) Dorsal appendage of aedeagus in lateral aspect very broad, median width over five times median width of ventral appendage (Text-fig. 262)
coacta sp. n. (p. 98)
- Dorsal appendage of aedeagus in lateral aspect narrow, median width less than four times median width of ventral appendage (Text-fig. 266)
pectoides sp. n. (p. 100)
- 40 (37) Ventral appendage of aedeagus in lateral aspect slightly trumpet-shaped or tube-like apically, extending up to or slightly beyond apex of dorsal appendage (Text-figs 277, 281) 41
- Ventral appendage of aedeagus in lateral aspect quadrate apically, extending much beyond apex of dorsal appendage (Text-fig. 271) *perlucida* sp. n. (p. 101)
- 41 (40) Pygofer process very long, extending to or beyond dorsal margin of pygofer (Text-figs 279, 284); aedeagus without flange on dorsal appendage (Text-figs 281, 288) 42
- Pygofer process short, not reaching dorsal margin of pygofer (Text-fig. 274); aedeagus with flange on dorsal appendage (Text-figs 276, 277)
lineata sp. n. (p. 103)
- 42 (41) Pygofer process serrate on inner lateral margin; dorsal appendage of aedeagus with broad ventral spines occupying about half of the ventral margin (Text-fig. 281) *marlatti* sp. n. (p. 105)
- Pygofer process without serrations on inner lateral margin; dorsal appendage of aedeagus with sharp ventral spines basally (Text-fig. 288)
borneoensis sp. n. (p. 107)
- 43 (35) Dorsal appendage of aedeagus with one pair of basal spines or ventral spine on base of stem (Text-figs 296, 302) 44
- Dorsal appendage of aedeagus with two pairs of long subapical spines (Text-fig. 291) *quadrifida* sp. n. (p. 108)
- 44 (43) Aedeagus with spines on dorsal appendage. 45
- Aedeagus with ventral spine on base of stem (Text-fig. 296)
leucomelana (Walker) (p. 110)
- 45 (44) Dorsal appendage of aedeagus with lateral or dorsal spines (Text-figs 306, 311). 46
- Dorsal appendage of aedeagus with ventral spines (Text-fig. 302)
pustula sp. n. (p. 112)
- 46 (45) Dorsal appendage of aedeagus with dorsal spines, flange dorsal subbasally (Text-figs 306, 307) *gladia* sp. n. (p. 113)
- Dorsal appendage of aedeagus with lateral spines, flange ventral subapically (Text-figs 311, 312) *villicaris* sp. n. (p. 115)
- 47 (16) Pygofer process aperturized apically (Text-figs 314, 319, 324) 48
- Pygofer process without aperture or opening apically (Text-figs 374, 377). 59
- 48 (47) Plate with distal segment subquadrate or semi-globular (Text-figs 315, 320, 325) 49
- Plate with distal segment typically elongate (Text-figs 354, 359) 56
- 49 (48) Pygofer process with aperture on inner apical margin; plate subquadrate (Text-figs 320, 325) 50
- Pygofer process with aperture on outer apical margin; plate semiglobular (Text-fig. 315) *straminea* (Osborn) (p. 117)

50	(49)	Pygofer process with large apical aperture, occupying one-half to one-third entire length of process (Text-figs 319, 324)	51
-		Pygofer process with small apical aperture, occupying about one-fourth entire length of process (Text-figs 339, 344)	54
51	(50)	Aedeagus with dorsal appendage narrowed at apical three-fourths in lateral aspect (Text-figs 321, 326); style clawed apically (Text-figs 323, 328)	52
-		Aedeagus with dorsal appendage narrowed at apical one-fourth in lateral aspect; style not clawed apically	53
52	(51)	Pygofer process with numerous striations apically; plate with posterior margin rounded (Text-fig. 320)	<i>vesiculata</i> sp. n. (p. 119)
-		Pygofer process without striations; plate with posterior margin angled (Text-fig. 325)	<i>maai</i> sp. n. (p. 120)
53	(51)	Pygofer process broad, slightly constricted medially; aedeagus with dorsal appendage vacuolated in lateral aspect (Text-fig. 331)	<i>caledoniensis</i> sp. n. (p. 122)
-		Pygofer process narrow, distinctly constricted medially; aedeagus with dorsal appendage not vacuolated (Text-fig. 336)	<i>danæ</i> sp. n. (p. 124)
54	(50)	Aedeagus with dorsal appendage narrowed at apical one-fourth in lateral aspect (Text-figs 346, 352)	55
-		Aedeagus with dorsal appendage narrowed at apical three-fourths in lateral aspect (Text-fig. 342)	<i>curtisi</i> sp. n. (p. 125)
55	(54)	Plate with dorsal margin truncate (Text-fig. 345)	<i>gressitti</i> sp. n. (p. 127)
-		Plate with dorsal margin narrowly rounded (Text-fig. 350)	<i>acusifera</i> sp. n. (p. 129)
56	(48)	Pygofer process with aperture on outer apical margin; plate with distal segment broadly rounded ventrally (Text-figs 359, 364)	57
-		Pygofer process with aperture on inner apical margin (Text-fig. 354); plate with distal segment truncate ventrally (Text-fig. 355)	<i>evansi</i> sp. n. (p. 131)
57	(56)	Style broadly clawed or hooked apically (Text-figs 368, 370)	58
-		Style narrowly clawed apically (Text-fig. 363)	<i>hebridensis</i> sp. n. (p. 132)
58	(57)	Aedeagus with ventral appendage produced distally beyond apex of dorsal appendage, apex enlarged (Text-fig. 366)	<i>metallica</i> (Osborn) (p. 134)
-		Aedeagus with ventral appendage produced up to apex of dorsal appendage, apex narrow (Text-fig. 371)	<i>vitiensis</i> sp. n. (p. 136)
59	(47)	Pygofer process toothed or serrated apically	60
-		Pygofer process not toothed or serrated apically	61
60	(59)	Pygofer process toothed apically (Text-fig. 374); style broadly and shallowly clawed (Text-fig. 375)	<i>hades</i> Linnavuori (p. 137)
-		Pygofer process serrated apically (Text-fig. 377); style narrowly and deeply clawed apically (Text-fig. 381)	<i>kassiphone</i> Kirkaldy (p. 139)
61	(59)	Pygofer process segmented or appearing to be segmented apically	62
-		Pygofer process not segmented apically	63
62	(61)	Pygofer process very long and slender, tapering apically (Text-fig. 382)	<i>ochracea</i> (Osborn) (p. 141)
-		Pygofer process moderately long, slightly robust, enlarged apically (Text-fig. 387)	<i>limbata</i> (Osborn) (p. 143)
63	(61)	Pygofer process with prominent transverse striations (Text-figs 392, 397, 402)	64
-		Pygofer process without striations (Text-figs 408, 416)	66
64	(63)	Pygofer process attenuated apically; aedeagus with appendages equal in length (Text-figs 399, 405)	65
-		Pygofer process narrowly triangulate apically; aedeagus with apex of ventral appendage distad of apex of dorsal appendage (Text-fig. 394)	<i>lenta</i> sp. n. (p. 144)
65	(64)	Pygofer process expanded subapically, striations broadly spaced (Text-fig. 397)	<i>transversa</i> sp. n. (p. 146)

- Pygofer process not expanded subapically; striations narrowly spaced (Text-fig. 402) *nausikaa* Kirkaldy (p. 147)
- 66 (63) Pygofer process constricted apically to a long, narrow finger-like lobe (Text-figs 408, 416) 67
- Pygofer process not as above (Text-figs 421, 426, 431) 68
- 67 (66) Aedeagus with apex of ventral appendage subquadrate (Text-fig. 413)
subquadrate sp. n. (p. 149)
- Aedeagus with apex of ventral appendage not as above (Text-fig. 418)
constricta sp. n. (p. 151)
- 68 (66) Pygofer process with lateral margins typically undulating throughout (Text-figs 421, 426) 69
- Pygofer process with lateral margins straight or only one side uneven (Text-figs 441, 446) 72
- 69 (68) Aedeagus with apex of ventral appendage even with or slightly distad of apex of dorsal appendage (Text-fig. 428). 70
- Aedeagus with apex of ventral appendage basad of apex of dorsal appendage (Text-fig. 423) *flavomaculata* Metcalf (p. 153)
- 70 (69) Pygofer process without longitudinal striations 71
- Pygofer process with longitudinal striations (Text-fig. 426)
ogygia Kirkaldy (p. 159)
- 71 (70) Pygofer process narrow at apical three-fourths (Text-fig. 431)
kalypto Kirkaldy (p. 160)
- Pygofer process narrow at apical one-fourth (Text-fig. 436)
nausikoides (Linnavuori) (p. 162)
- 72 (68) Pygofer process very narrow throughout most of its length, overall width about equal to width of ventral appendage of aedeagus (Text-figs 441, 446). 73
- Pygofer process broad throughout most of its length, overall width exceeding width of ventral appendage of aedeagus (Text-figs 474, 479) 78
- 73 (72) Plate with distal segment long and narrow (Text-figs 442, 447) 74
- Plate with distal segment broad (Text-figs 465, 470) 77
- 74 (73) Aedeagus with appendages nearly appressed (Text-figs 451, 456) 75
- Aedeagus with appendages broadly separated (Text-fig. 444) *stabula* sp. n. (p. 164)
- 75 (74) Pygofer process with crenulations or lateral margins undulating apically (Text-figs 454, 459) 76
- Pygofer process without crenulations or undulating lateral margins (Text-fig. 446) *ocellata* Kirkaldy (p. 165)
- 76 (75) Pygofer process with crenulations (Text-fig. 454). *crenulata* sp. n. (p. 167)
- Pygofer process with lateral margins undulating apically (Text-fig. 459)
bimaculata sp. n. (p. 169)
- 77 (73) Plate long and very broad; distribution Society Islands (Text-fig. 465)
tahitiensis (Osborn) (p. 172)
- Plate very short and broad; distribution Australia (Text-fig. 470)
hackeri (Evans) (p. 174)
- 78 (72) Pygofer process with lateral margins evenly and sharply tapered apically (Text-figs 474, 479) 79
- Pygofer process with lateral margins not as above (Text-figs 484, 489) 81
- 79 (78) Style broadly clawed apically (Text-figs 482, 488). 80
- Style narrowly and deeply clawed apically (Text-fig. 478) *flavocosta* sp. n. (p. 176)
- 80 (79) Plate long and narrow (Text-fig. 480). *dorsimacula* (Walker) (p. 176)
- Plate short and broad (Text-fig. 485) *testacea* (Walker) (p. 179)
- 81 (78) Pygofer process with small or twisted apex (Text-figs 494, 499) 82
- Pygofer process with enlarged apex (Text-fig. 489) *nigroides* sp. n. (p. 181)
- 82 (81) Pygofer process twisted apically and with striations apically; plate long and very broad (Text-fig. 495) *lutea* (Montrouzier) (p. 183)

- Pygofer process not as above; plate long and narrow (Text-fig. 500)
lamma sp. n. (p. 185)

***Tharra tiarata* (Stål) comb. n.**

(Text-figs 73-78)

Coelidia tiarata Stål, 1865 : 159. LECTOTYPE ♀, RAJA AMPAT Is. (West Irian) (NR, Stockholm), here designated [examined].

Nisitra varipes Walker, 1870 : 328. Holotype ♂, RAJA AMPAT Is. (West Irian) (BMNH, London) [examined]. **Syn. n.**

Nisitra telifera Walker, 1870 : 328. Holotype ♀, RAJA AMPAT Is. (West Irian) (BMNH, London) [examined]. **Syn. n.**

Coelidia tiarata Stål; Metcalf, 1964 : 78.

Nisitrana varipes (Walker); Metcalf, 1964 : 85.

Nisitrana telifera (Walker); Metcalf, 1964 : 85.

General colour pale stramineous.

Head narrower than pronotum; crown long and narrow, produced considerably beyond proximal margin of eyes, distal length nearly two-thirds entire median length, striate longitudinally, slightly carinate laterally, lateral margins slightly convex, disk elevated above eyes; ocelli small, situated laterally; eyes moderate size, occupying less than half total dorsal area of head.

Male pygofer in lateral aspect with short process arising from middle of caudal margin, process bulbous dorsally with spine-like projection ventrally; aedeagus in lateral aspect with small lateral spine on middle of dorsal appendage, projecting basally; ventral appendage with subapical flange laterally and a keeled flange ventrally; gonopore apical; connective Y-shaped; style with apex broadly hooked; plate elongate, terminal segment slightly bulbous subapically.

Female seventh sternum with posterior margin produced medially.

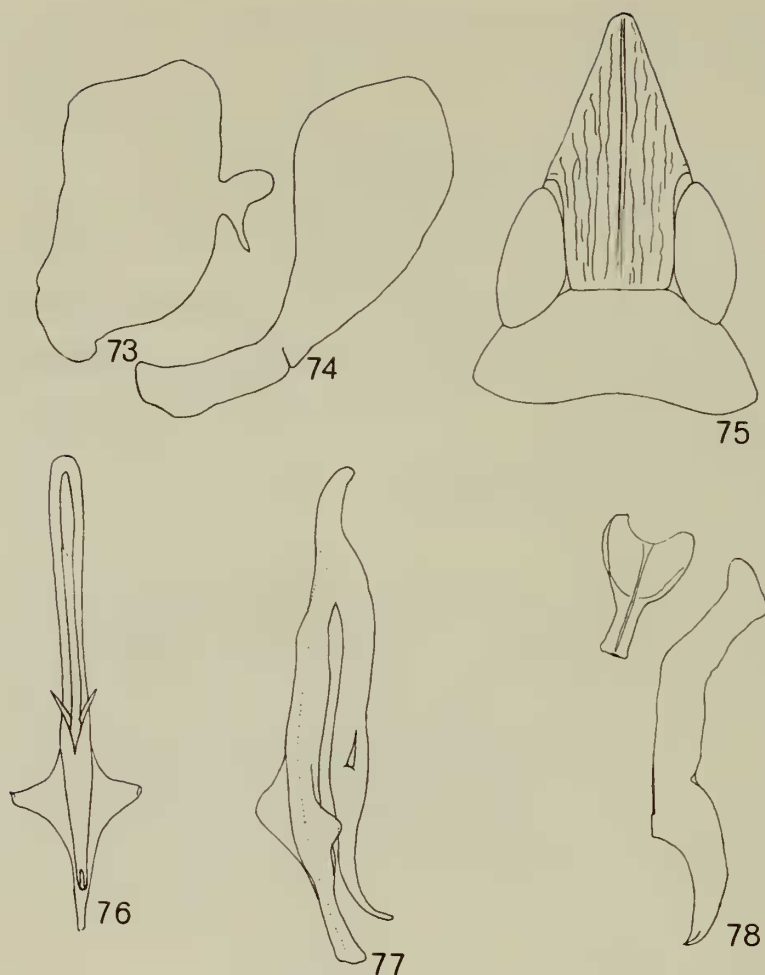
DISTRIBUTION. Misoöl (West Irian, Raja Ampat Is.).

SPECIMENS EXAMINED.

Coelidia tiarata Stål, lectotype ♀, 'Mysol' [MISOÖL] (*Stevens*) (NR, Stockholm); paralectotype ♂, 'Mysol' [MISOÖL] (*Stevens*) (NR, Stockholm). *Nisitra varipes* Walker, holotype ♂, 'Mysol' [MISOÖL] (*Wallace*) (BMNH, London). *Nisitra telifera* Walker, holotype ♀, 'Mysol' [MISOÖL] (*Wallace*) (BMNH, London). Examination of these types has shown that the last two names are junior synonyms of *tiarata*.

BIOLOGY. Unknown.

REMARKS. *Tharra tiarata* is a rare and unique species, having the longest head of any known species in the genus. From *frontalis*, to which it is similar in genitalic characters, *tiarata* can be separated by the short pygofer process and the flanged ventral appendage of the aedeagus.



FIGS 73-78. *Tharra tiarata* (Stål). 73, male pygofer, lateral view; 74, plate, lateral view; 75, head and pronotum, dorsal view; 76, aedeagus, dorsal view; 77, aedeagus, lateral view; 78, style and connective, dorsal view.

Tharra frontalis sp. n.

(Text-figs 79-87)

Length: ♂ 5.50-5.70 mm, ♀ 6.50 mm.

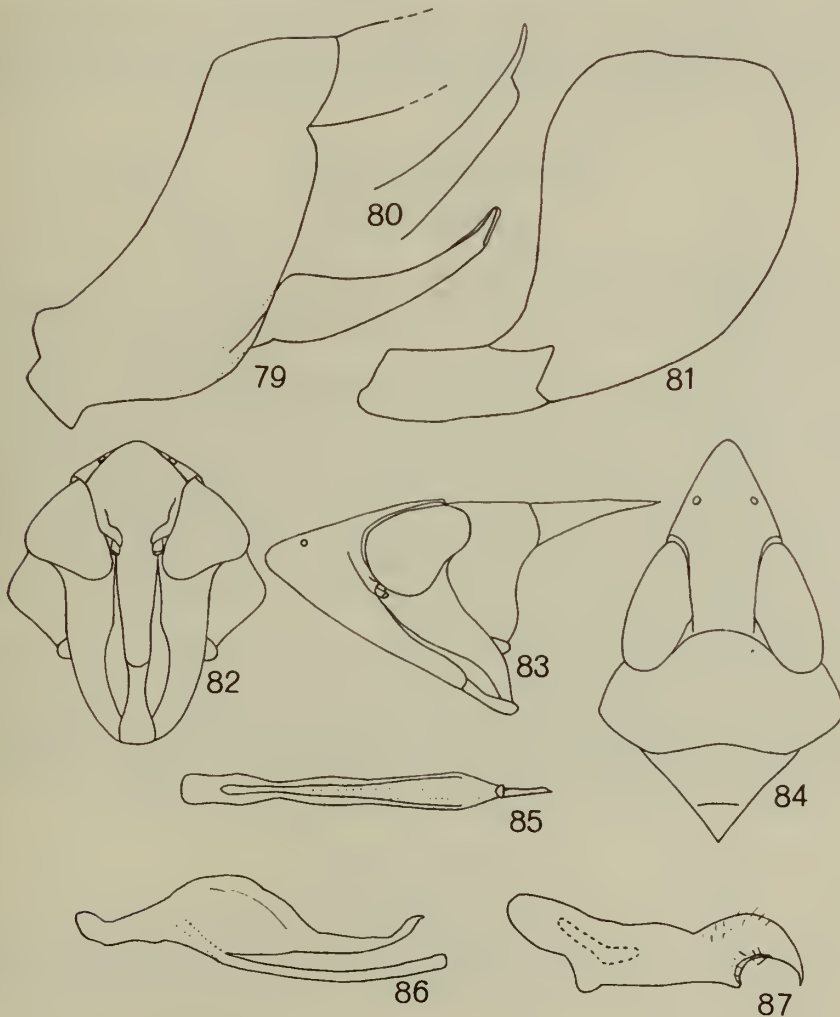
General colour light ochre, sometimes with light brown markings on elytra. Crown, pronotum and scutellum light ochre; eyes dark brown.

Head narrower than pronotum; crown long and narrow, produced beyond proximal margin of eyes, distal length about one-half total median length, surface striate radially, lateral margins slightly convergent basally, disk elevated above eyes, slightly depressed medially; pronotum with median length less than median length of crown, surface minutely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins distinct, appendix well developed; clypeus long, lateral margin convergent posteriorly, surface finely

granulose, rugulose on anterior margin; clypellus with lateral margins narrowed basally, diverging apically.

Male pygofer in lateral aspect with long blade-like process arising from caudoventral margin, apex encapsulated with fine membrane, membrane sometimes broken, sclerotized apex constricted subapically on lateral margin to form short finger-like lobe; aedeagus in lateral aspect simple; dorsal appendage without processes or flanges, apical half tube-like, curved dorsally apically; ventral appendage long, tube-like, apex exceeding apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with terminal segment subquadrate.

Female seventh sternum with posterior margin nearly truncate.



FIGS 79-87. *Tharra frontalis* sp. n. 79, male pygofer, lateral view; 80, pygofer spine of specimen from Guadalcanal, Solomon Islands; 81, plate, lateral view; 82, face; 83, head, pronotum and scutellum, lateral view; 84, head, pronotum and scutellum, dorsal view; 85, aedeagus, dorsal view; 86, aedeagus, lateral view; 87, style, lateral view.

SPECIMENS EXAMINED.

Holotype ♂, SOLOMON ISLANDS: San Cristoval, Bweinaniawarikiaper, light trap, 12.viii.1960 (C. W. O'Brien) (BPBM, Honolulu).

Paratypes. SOLOMON ISLANDS: allotype ♀, Florida Is., Nggela I., Haleta, 0-100 m, light trap, 7.x.1964 (R. Straatman) (BPBM, Honolulu); 1 ♂, same data as allotype (USNM, Washington); 1 ♂, same data as allotype (BMNH, London); Guadalcanal, Mt Austin, 300 m, 1 ♂, 25.iv.1964 (R. Straatman), in author's collection.

BIOLOGY. Host is unknown but records indicate that adults are prevalent from April to October.

REMARKS. This species is similar to *flamma* in head characters and the form of the aedeagus but *frontalis* can be distinguished from the latter by the blade-like pygofer process and the subquadrate plate.

Tharra flamma sp. n.

(Text-figs 88-92)

Length: ♂ 5.40-6.00 mm, ♀ 5.50-6.20 mm.

Colour ochre with brown markings on elytra. Head, pronotum, and scutellum generally ochraceous, sometimes pronotum specked with brown; scutellum usually with brown markings; eyes dark brown.

Head narrower than pronotum; crown long and broad, produced distally beyond anterior margin of eyes, distal length about one-half entire median length, striate radially, carinate medially, lateral margins parallel, disk elevated above eyes, interocular width nearly equal to median length; ocelli small, situated laterally; eyes moderate size, occupying less than one-half total dorsal area of head, compressed laterally; pronotum with median length less than median length of crown, surface minutely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins distinct, appendix well developed; clypeus long, very broad anteriorly, with prominent, short median longitudinal carina anteriorly, surface finely granulose at posterior two-thirds, transversely rugulose at anterior one-third; clypellus short, with lateral margins nearly parallel.

Male pygofer in lateral aspect with large curved process arising from caudoventral margin, process constricted medially, trumpet-shaped apically, apical margins membraneous; aedeagus in lateral aspect simple; dorsal appendage without spines or processes, attenuated at apical two-thirds, curved dorsally apically; ventral appendage long, extending beyond apex of dorsal appendage, slightly enlarged and hooked apically; connective Y-shaped; style clawed apically; plate with terminal appendage elongate, dorsal margin expanded medially.

Female seventh sternum with posterior margin slightly produced medially.

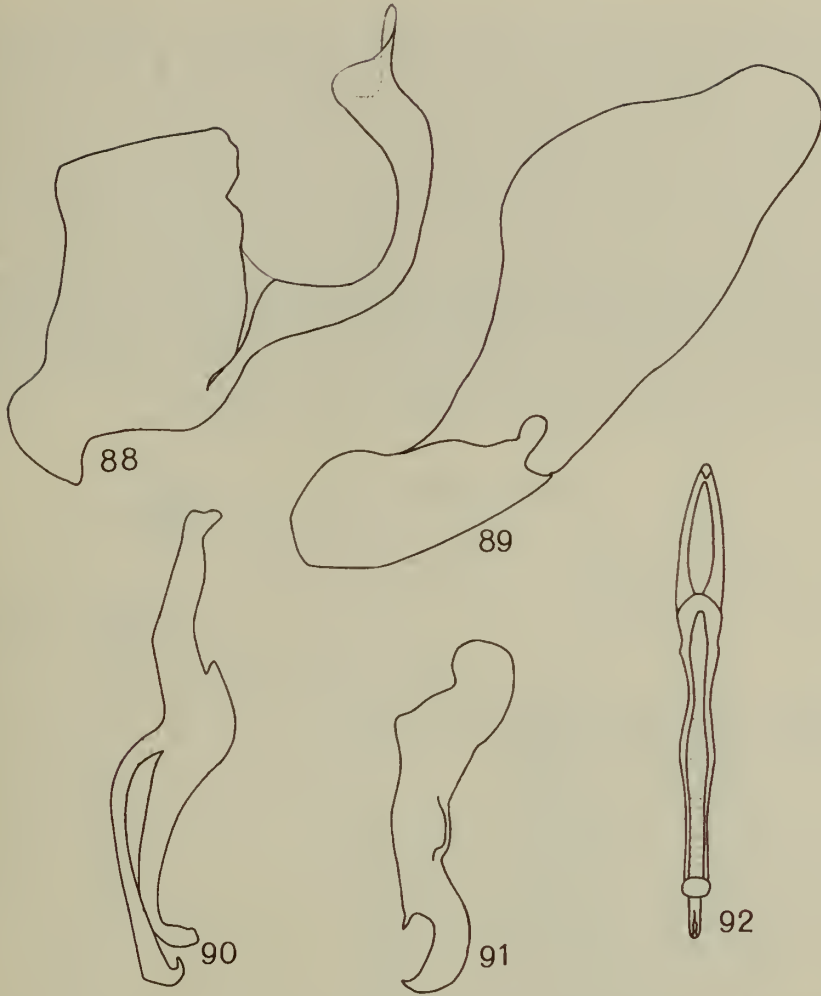
SPECIMENS EXAMINED.

Holotype ♂, MOLUCCAS: Ambon (F. Muir) (BPBM, Honolulu).

Paratypes. MOLUCCAS: allotype ♀, same data as holotype (BPBM, Honolulu); 1 ♂, 1 ♀, same data as holotype (BMNH, London); 1 ♂, same data as holotype (USNM, Washington); 1 ♂, 1 ♀, same data as holotype, in author's collection.

BIOLOGY. Unknown.

REMARKS. This species is one of the few in the genus *Tharra* that has a distinct carina on the clypeus, albeit an incomplete one. Among the long-headed species, *flamma* can be distinguished from *oxyomma* by this character and the broad crown.



FIGS 88-92. *Tharva flamma* sp. n. 88, male pygofer, lateral view; 89, plate, lateral view; 90, aedeagus, lateral view; 91, style, lateral view; 92, aedeagus, dorsal view.

***Tharra nitida* sp. n.**

(Text-figs 93-97)

Length: ♂ 4.20 mm, ♀ 4.70-5.10 mm.

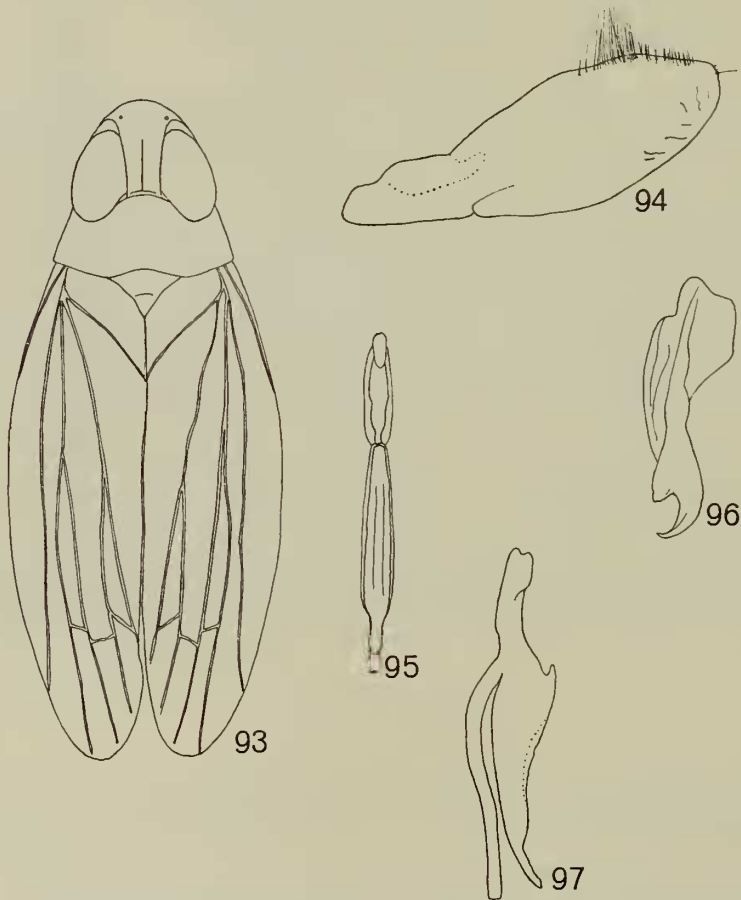
General colour light ochraceous; sexual dimorphism apparent; crown light ochraceous to deep ochraceous; eyes rufous; pronotum and scutellum light ochraceous to deep ochraceous; elytra light ochraceous, somewhat hyaline in female; clypeus and clypellus light ochraceous.

Head narrower than pronotum; crown long, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, lateral margins slightly convergent basally, disk slightly depressed basally and only slightly elevated above

level of eyes; ocelli small, situated anteriolaterally; eyes large, somewhat globular, occupying about two-thirds entire dorsal area of head; pronotum very short, median length much less than median length of crown, lateral angle slightly overlapping base of elytra, surface smooth; scutellum very short, median length less than median length of pronotum; elytra long and narrow in male, short, somewhat subbrachypterous in female, portion of female pygofer and ovipositor sheath extending beyond apex of elytra, clypeus elongate, very broad anteriorly, narrowed posteriorly, broader medially near antennal sockets, without median longitudinal carina, surface finely granulose throughout; clypellus with lateral margins expanded apically.

Male pygofer is not described here because it was lost during dissection. Aedeagus in lateral aspect with dorsal appendage very broad basally, becoming narrowly attenuated subapically, apex very narrow and curved caudodorsally, without spines or flanges; ventral appendage long, tube-like, slightly curved, apex reaching apex of dorsal appendage; gonopore apical; connective Y-shaped; style very narrowly clawed apically; plate with distal segment long, very narrow, about twice as long as wide, dorsal and ventral margins only slightly expanded.

Female seventh sternum with posterior margin produced medially.



FIGS 93-97. *Tharra nitida* sp. n. 93, head, pronotum, scutellum and elytra, dorsal view; 94, plate, lateral view; 95, aedeagus, dorsal view; 96, style, lateral view; 97, aedeagus, lateral view.

SPECIMENS EXAMINED.

Holotype ♂, SOCIETY IS.: Raiatea I., 1200–1600 ft, Temehani Plateau, collected from *Metrosideros*, 5.x.1934 (*E. C. Zimmerman*) (BPBM, Honolulu).

Paratypes. SOCIETY IS.: allotype ♀, same date as holotype (BPBM, Honolulu); 1 ♀, same data as holotype, in author's collection; Raiatea, 1 ♀, 1926–27 (*J. W. Moore*) (LTF, Turku).

BIOLOGY. Information is very meagre on this species. Data collecting labels indicate that it was found on *Metrosideros*.

REMARKS. This is a very rare and unusual species, having the base of elytra partially concealed by the anterior lateral margins of the pronotum. It also has a very small scutellum which is characteristic of Tinobregmini. However, the segmented male plate and bispinulate aedeagus place the species in the tribe Tharrini and the genus *Tharra*.

***Tharra rufivena* (Walker) comb. n.**

(Text-figs 98–105)

Coelidia rufivena Walker, 1870 : 312. LECTOTYPE ♀, HALMAHERA (BMNH, London), here designated [examined].

Coelidia rufivena Walker; Metcalf, 1964 : 73.

Length: ♂ 4.90–5.30 mm, ♀ 5.70–6.10 mm.

General colour fuscopiceous with veins usually light brown in ♀, black in ♂. Crown fuscous to light brown; eyes fuscous to brown; pronotum and scutellum piceous; elytra piceous in ♂, fuscopiceous in ♀, veins black in ♂, light brown in ♀, sometimes with light brown spots in ♀; clypeus and clypellus piceous to light brown.

Head narrower than pronotum; crown short, barely exceeding anterior margin of eyes, declivous anteriorly, disk depressed slightly on each side of middle, striate radially, lateral margins slightly convex; ocelli small, situated on anterior margin of crown; eyes large, occupying two-thirds entire dorsal area of head, slightly bulbous anteriolaterally; pronotum with median length equal to median length of crown, surface covered with minute knobs; scutellum large, median length greater than median length of pronotum; elytra elongate-ovoid, veins prominent, venation as in generic description; clypeus long, broad anteriorly, narrowed posteriorly, with a prominent, nearly complete median longitudinal carina, surface finely granulose, rugulose along anterior margin; clypellus with lateral margins divergent apically.

Male pygofer in lateral aspect with process arising from caudoventral margin, process short, curved, sclerotized, with a long filamentous secondary process arising subbasally from mesal margin and extending caudodorsally; aedeagus in lateral aspect with a row of teeth on ventral margin of dorsal appendage; dorsal appendage gradually tapered apically; ventral appendage tube-like throughout, terminating to apex of dorsal appendage; gonopore apical; connective Y-shape; style clawed apically; plate with terminal segment long and narrow.

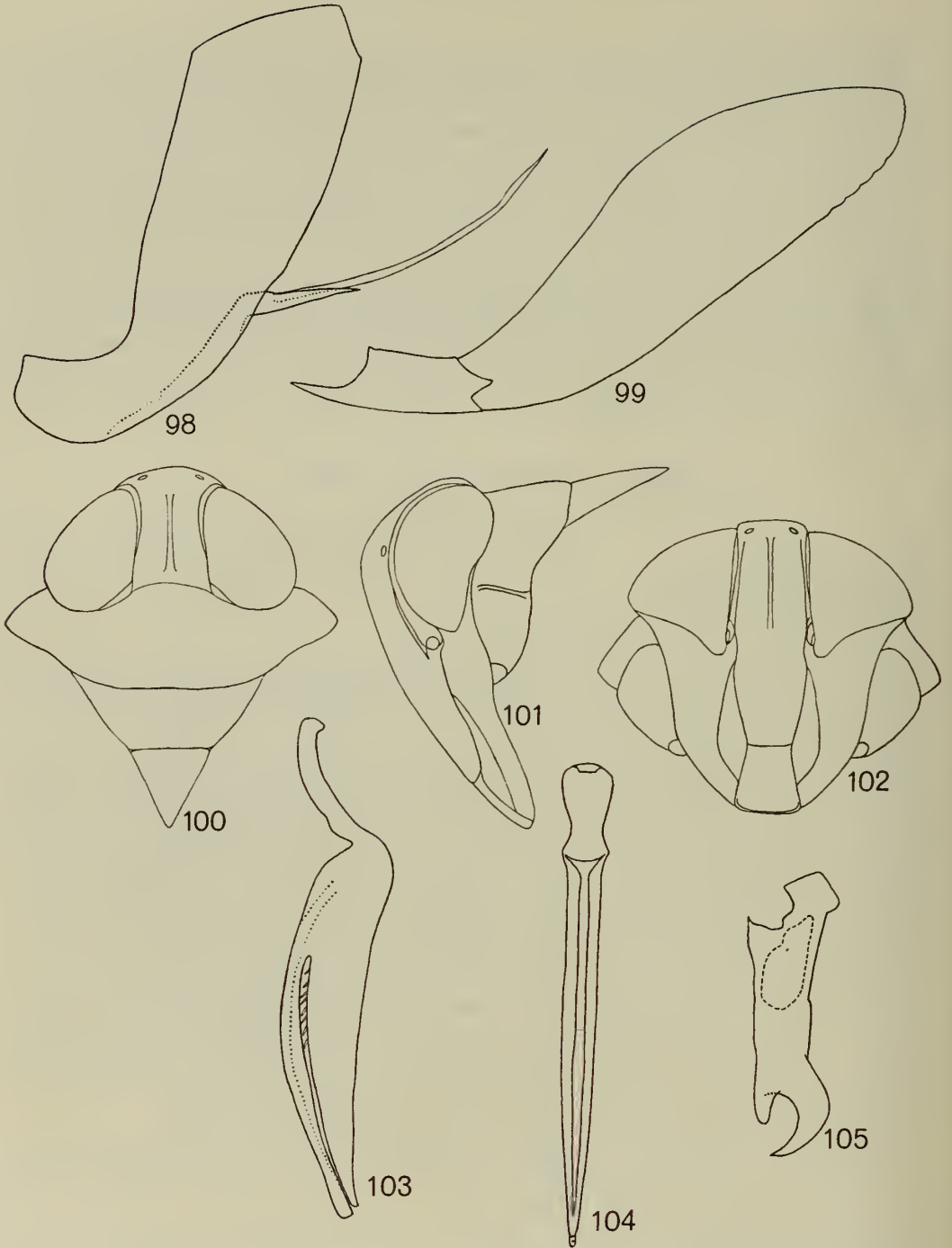
Female seventh sternum with posterior margin produced slightly at middle.

DISTRIBUTION. Moluccas, Bismarck Archipelago, New Guinea, Solomon Islands (previously known only from the Moluccas).

SPECIMENS EXAMINED.

Coelidia rufivena Walker, lectotype ♀, HALMAHERA (*Wallace*) (BMNH, London).

MOLUCCAS: Ambon, 1 ♂, 1903–31 (*W. Doherty*); Ternate, 1 ♀, 1903–31 (*W. Doherty*); Piroe,



FIGS 98-105. *Tharra rufivena* (Walker). 98, male pygofer, lateral view; 99, plate, lateral view; 100, head, pronotum and scutellum, dorsal view; 101, head, pronotum and scutellum, lateral view; 102, face; 103, aedeagus, lateral view; 104, aedeagus, dorsal view; 105, style, lateral view.

Ceram, 1 ♀, i. 1909 (*F. Muir*). NEW GUINEA: Kulima, 1400 m, 7 ♂, 3 ♀, 19–22.ii.1960 (*T. C. Maa*); Genjam, 40 km W. Hollandia, 100–200 m, 2 ♂, 4 ♀, 1–10.iii.1960 (*T. C. Maa*); Papua, Woodlark I. (Murua), Kulamadau Hill, 2 ♂, 7 ♀, 10–25.ii.1957 (*W. W. Brandt*); Hollandia area, W. Sentani, Cyclops Mts, 150–250 m, 1 ♂, 4 ♀, 17–19.vi.1959 (*T. C. Maa*); Eramboe, 80 km ex Merauke, 3 ♂, 1.ii.1960 (*T. C. Maa*); Waris, S. of Hollandia, 450–500 m, 12 ♂, 7 ♀, 1–17.viii.1959 (*T. C. Maa*); Humboldt Bay, 1 ♂, 1 ♀, iv. 1936 (*L. E. Cheesman*); Cyclops Mts, Sabron, Camp I, 1200 ft, 1 ♂ (*L. E. Cheesman*); Cyclops Mts, Mt Lina, 3500 ft, 1 ♀, iii. 1936 (*L. E. Cheesman*); Papua, Kokoda, 1200 ft, 1 ♂, iv. 1933 (*L. E. Cheesman*); Vogelkop, Kebar Val., W. of Manokwari, 550 m, 1 ♂, 4–31.i.1962 (*S. Quate*); Nadzal, Markham River Val., E. Fork Ngafin Cr., 1000–3000 ft, native trail, 1 ♂, 16.vii.1944 (*K. V. Krombein*); Biak I., 1 ♂, 25.iv.1945 (*G. E. Bohart*); 4 km W. of Green River Post, 200 m, 1 ♂, 29.vi.1963 (*R. Straatman*); Torricelli Mts, Wantipi Village, 1 ♀, 30.xi.1958 (*W. W. Brandt*); Cyclops Mts, Ifar, 300 m, 1 ♀, 21.vi.1959 (*T. C. Maa*); Bodem, 11 km S.E. Oerberfaren, 1 ♂, 7–17.vii.1959 (*T. C. Maa*); Dreikikir, Sepik Distr., 350 m, 1 ♂, 23.vi.1961 (*J. L. Gressitt*); May R., Patrol Sta., 100 m, 3 ♀, 30.v.1963 (*R. Straatman*); Fakfak, 1 ♂, 20.vii.1939 (*G. R. Wind*); Papua, Brown River, 2 ♂, 20.viii.1959 (*T. C. Maa*); Vunabakan, 180 m, 10 km E. Keravat, 1 ♀, 16–20.xi.1959 (*T. C. Maa*); Bairyik, 150 m, S. of Maprik, 2 ♂, 1 ♀, 12.i.1960 (*T. C. Maa*); Lae, 1 ♀, viii. 1944 (*F. E. Skinner*); Maprik, 160 m, 1 ♂, 14.x.1957 (*J. L. Gressitt*); Munda, 1 ♀, xi. 1944 (*R. W. Brubaker*); Sapik, Angoram, 20–30 m, 1 ♀, 14–16.viii.1969 (*J. L. Gressitt*); Vogelkop, Fakfak, S. Coast of Bomberai, 10–100 m, 1 ♂, 10.vi.1959 (*T. C. Maa*); Koitaki, 1500 ft, 1 ♀, xi. 1928 (*Pemberton*); Papua, Laloki, 1 ♂, 3.ii.1910 (*F. Muir*). BISMARCK ARCHIPELAGO: Vudal, New Britain, S.W. of Keravat, 16 ♂, 10 ♀, 13.xii.1959 (*T. C. Maa*); New Britain, Keravat, 135 m, 5 ♂, 3 ♀, 20–25.xi.1959 (*T. C. Maa*); New Ireland, Gilingil Pl'n., 2 m, 3 ♀, 5.vii.1956 (*J. L. Gressitt*); New Ireland, Kavieng, 1 ♂, 2.vii.1959 (*J. L. Gressitt*); New Ireland (S.W.), Ridge above 'Camp Bishop', 15 km up Kait R., 250–750 m, 4 ♂, 2 ♀, 9–14.vii.1956 (*J. L. Gressitt*); Manus I., Momote, 5 ♂, 5 ♀, 24.xii.1959 (*T. C. Maa*); Manus I., Lorenga, 1–75 m, 1 ♂, 28.vi.1959 (*J. L. Gressitt*); Lavongai, Banatam, 3 ♂, 25.iii.1962 (*Noona Dan Expn 61–62*); Rossus, 6 km S.E. Lorengau, 180 m, 12 ♂, 4 ♀, 23.xii.1959 (*T. C. Maa*); New Britain, Warongi Valley, Gazelle Pen., 100 m, 1 ♂, 1 ♀, 25.v.1956 (*J. L. Gressitt*); New Britain, Gazelle Pen., Upper Warangoi, Arabura, 250 m, 1 ♀, 28.xi.1962 (*J. Sedlacek*); Gazelle Pen., Ganlim, 130 m, 1 ♂, 1 ♀, 28.x.1962 (*J. Sedlacek*); New Britain, Gazelle Pen., Bainings, St Paul, 350 m, 2 ♂, 1 ♀, 7.ix.1955 (*J. L. Gressitt*); New Britain, Gazelle Pen., Talliligap, 300 m, 1 ♂, 17–18.xii.1962 (*J. Sedlacek*); New Britain, Ti, Nakarai Mts, 1 ♂, 28.vii.1956 (*E. J. Ford*). SOLOMON IS.: San Cristobal, Kira-Kira, 0–50 m, 5 ♂, 2 ♀, 6.xi.1964 (*R. Straatman*); Guadalcanal, Tambalia, 30 km W. Honiara, 1 ♂, 1 ♀, 27.v.1964 (*R. Straatman*); Guadalcanal, Honiara, 1 ♂, 2 ♀, 22.iv.1964 (*R. Straatman*); San Cristobal, Wairahu R., 100–400 m, 9 ♂, 8 ♀, 9–15.v.1964 (*J. Sedlacek*); Isabel Tasia, 5 ♂, 20.i.1965 (*M. McQuillan*), Guadalcanal, Betikama R., 1 ♀, viii. 1960 (*W. W. Brandt*); Bougainville, Kikugai Village, 150 m, 1 ♀, xii. 1960 (*W. W. Brandt*); Bougainville, Boku, 1 ♀, 4–6.vi.1956 (*J. L. Gressitt*); Guadalcanal, Metan Kan River, 1 ♂, 2 ♀, 11.vii.1944 (*H. E. Milliron*); New Georgia Group, Gizo I., 100 m, 1 ♀, 16.viii.1964 (*J. L. Sedlacek*); San Cristobal, Wugiroga, 1 ♀, 8.viii.1960 (*C. W. O'Brien*); Guadalcanal I., Munda, 15–30 m, 1 ♂, 14–15.vii.1959 (*J. L. Gressitt*); San Cristobal, Pooma, 0–30 m, 1 ♂, 16–17.v.1964 (*J. L. Sedlacek*); Santa Ysabel, Tamatahi, 450 m, 1 ♀, 2.vii.1960 (*C. W. O'Brien*); Rain Forest, 17 km West of Honiara, 1 ♂, 28–29.vii.1962 (*Noona Dan Expn 61–62*); New Georgia Group, N. Georgia I., Munda, 1–30 m, 2 ♂, 1 ♀, 6.viii.1959 (*J. L. Gressitt*); Tulagi I., 1 ♂, 19.v.1933 (*M. Willows*); Bougainville, Naval Air Base, 2 ♂, iv. 1945 (*G. E. Bohart*); Malaita, Tangtalan, 200 m, 1 ♂, 30.ix.1957 (*J. L. Gressitt*); Kolombangara I., Kukunda, S.W. Coast, 1–12 m, 1 ♂, 10.viii.1959 (*J. L. Gressitt*); Arundel I., Nauru, 4 ♂, 2 ♀, 29.iii.1935 (*R. A. Lever*).

BIOLOGY. Specimens were swept from Ginger. Collection records indicate that the species is prevalent during all months of the year.

REMARKS. *Tharra rufivena* is a rather unique species, having a very short crown and a well developed median carina on the clypeus. From *papuaensis*

to which it is similar in genitalic characters, *rufivena* can be distinguished by the short, sclerotized, curved pygofer process with a secondary, long filamentous process arising subbasally.

***Tharra papuaensis* sp. n.**

(Text-figs 106-110)

Length: ♂ 4.90-5.30 mm, ♀ unknown.

General colour fuscous to piceous with veins piceous. Crown testaceous; eyes rufous; pronotum and scutellum piceous, elytra piceous with scattered ochreous spots and apex with broad ochreous band; clypeus and clypellus piceous.

Head narrower than pronotum; crown as in *rufivena* except lateral margins slightly convergent basally, disk without depressed areas, elevated above eyes; ocelli small, situated on anterior margin of crown; eyes large, globular, occupying about two-thirds total dorsal area of head; pronotum long, median length greater than median length of crown, surface covered with minute knobs; scutellum large, median length greater than median length of pronotum; elytra elongate-ovoid, veins prominent, venation as in generic description; clypeus and clypellus as in *rufivena*, with prominent, nearly complete median longitudinal carina on clypeus.

Male pygofer in lateral aspect with long process, process with a large secondary subbasal process and several sharp spine-like processes on apical half of anterior margin; aedeagus in lateral aspect with row of teeth on ventral margin of dorsal appendage; dorsal appendage attenuated abruptly subapically, curved caudodorsally apically; ventral appendage tube-like, apex reaching apex of dorsal appendage; gonopore terminal; connective Y-shape; style as in *rufivena*; plate with terminal segment elongate.

SPECIMENS EXAMINED.

Holotype ♂, NEW GUINEA: Papua, Mt Rui, Sudest I., 250-350 m, No. 10, 5.ix.1956 (*L. J. Brass*) (AMNH, New York).

Paratypes. NEW GUINEA: 1 ♂, same data as holotype (AMNH, New York); 1 ♂, same data as holotype, in author's collection.

BIOLOGY. Unknown.

REMARKS. This species is identical to *rufivena* in many aspects of the general habitus but can be separated by the long pygofer process with subbasal secondary process and several sharp spine-like processes distally.

***Tharra maculiceps* (Walker) comb. n.**

(Text-figs 111-118)

Coelidia maculiceps Walker, 1870 : 315. Holotype ♀ [not ♂ as stated by Walker], MOLUCCAS: Sula Is. (BMNH, London) [examined].

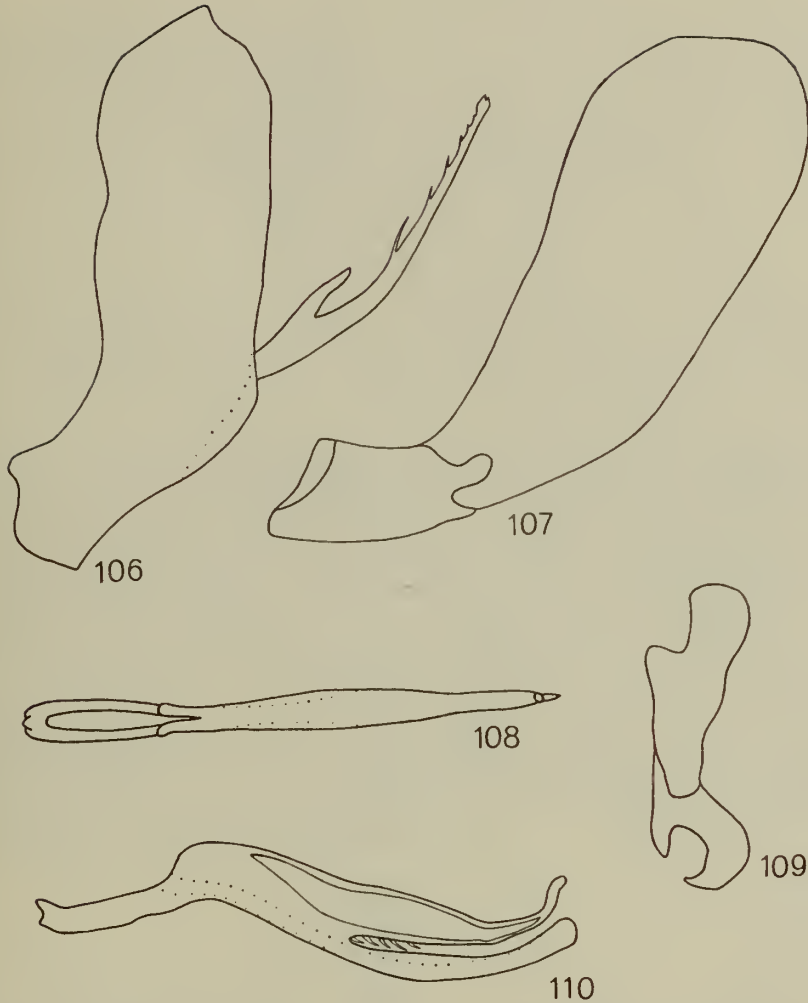
Tharra carinata Baker, 1915 : 58. LECTOTYPE ♂, PHILIPPINES: Luzon, Mt Makiling (USNM, Washington), here designated [examined]. **Syn. n.**

Coelidia maculiceps Walker; Metcalf, 1964 : 58.

Tharra carinata Baker; Metcalf, 1964 : 23.

Length: ♂ 5.23-6.30 mm, ♀ 6.30-6.62 mm.

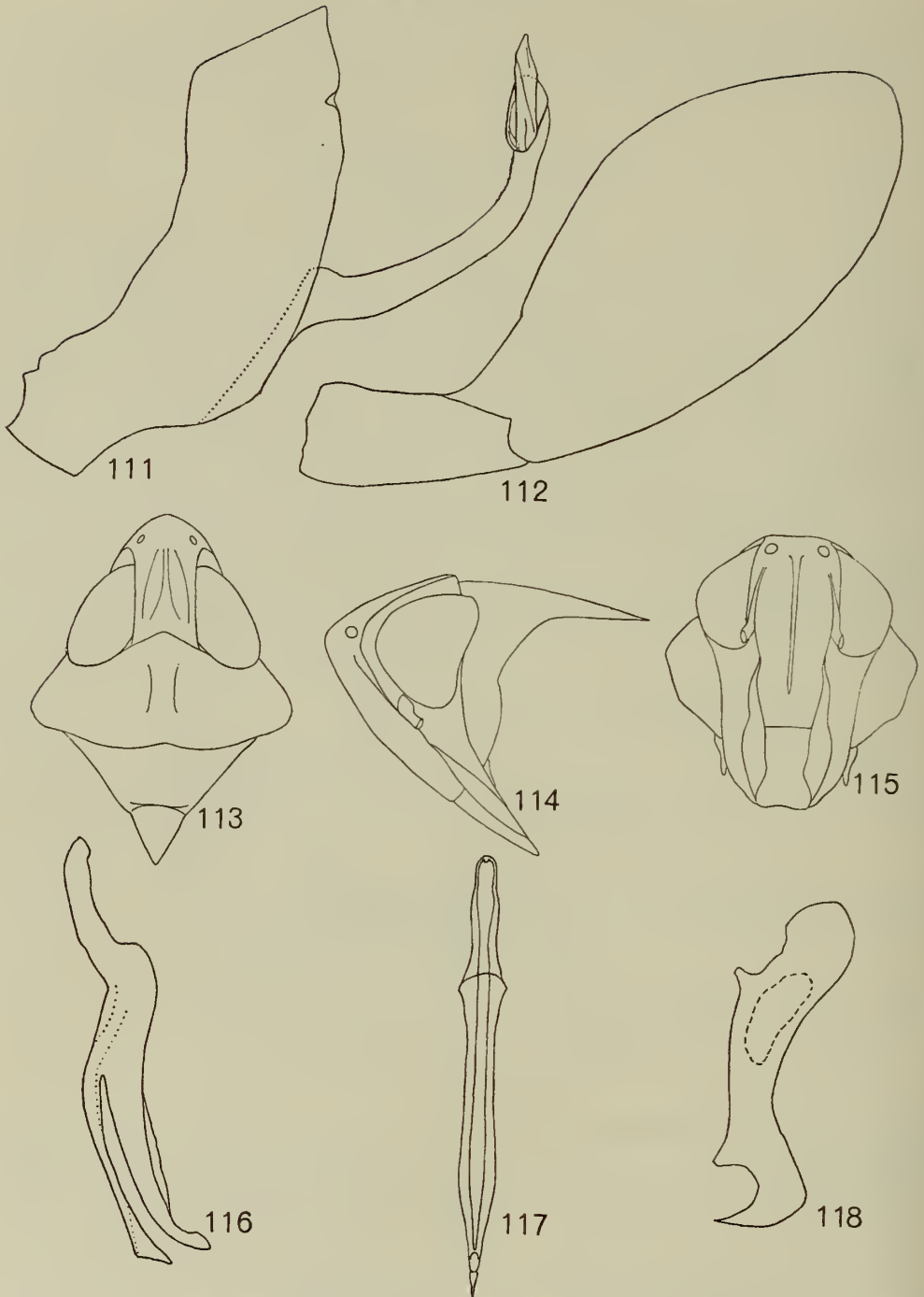
General colour rufous with markings on elytra. Crown ochre to light rufous, a light to dark red spot on each side of middle between eyes; pronotum rufous, sometimes suffused with dark brown along anterior margin; scutellum light rufous; elytra with rufous venation and cells



FIGS 106-110. *Tharra papuaensis* sp. n. 106, male pygofer, lateral view; 107, plate, lateral view; 108, aedeagus, dorsal view; 109, style, lateral view; 110, aedeagus, lateral view.

light to deep reddish brown, usually with a few pale vittae or markings in cells, apex very light rufous; clypeus ochre with a narrow red transverse band anteriorly and one medially; clypellus ochre.

Head narrower than pronotum, crown produced distally beyond anterior margin of eyes, distal length about one-half entire median length, striate radially, depressed medially, carinate laterally, lateral margins slightly convex, disk elevated above eyes; ocelli small, situated anteriolaterally; eyes large and elongate, occupying nearly two-thirds entire dorsal area of head; pronotum short, median length less than median length of crown; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, venation as in generic description, appendix well developed; clypeus long, broad anteriorly, narrowed posteriorly, lateral margins slightly carinate, with prominent nearly complete median



FIGS 111-118. *Tharra maculiceps* (Walker). 111, male pygofer, lateral view; 112, plate, lateral view; 113, head, pronotum and scutellum, dorsal view; 114, head, pronotum and scutellum, lateral view; 115, face; 116, aedeagus, lateral view; 117, aedeagus, dorsal view; 118, style, lateral view.

longitudinal carina, surface finely granulose, anteriolateral margins thinly rugulose, clypeus with lateral margins diverging apically.

Male pygofer in lateral aspect with long curved process, process with lateral margins nearly equidistant throughout, apex enlarged, subencapsulated, rugulose; aedeagus simple, without spines or processes; dorsal appendage curved dorsally at apex; ventral appendage slightly trumpet-shaped apically, reaching to apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with terminal segment elliptical.

Female seventh sternum with posterior margin produced medially.

DISTRIBUTION. Moluccas, Philippines, North Borneo (new record).

SPECIMENS EXAMINED.

Coelidia maculiceps Walker, holotype ♀, MOLUCCAS: Sula Is. (Wallace) (BMNH, London). *Tharra carinata* Baker, lectotype ♀, Luzon, Mt Makiling (Baker) (USNM, Washington).

BORNEO: Sandakan, 2 ♂, 2 ♀ (Baker); 1 ♀, i.1927 (Pemberton); Samawang, nr Sandakan, 1 ♂, 1 ♀, 13-14.vii.1927; 1 ♂, 1 ♀, 5.ix.1927. PHILIPPINES: Mt Makiling, Luzon, 12 ♂, 6 ♀ (Baker); Sibuyan Island, 9 ♂, 4 ♀ (Baker); Mt Bonahao, 1 ♂, 2 ♀ (Baker); Zambonga, Mindanao, 1 ♂, 2 ♀, 1927 (Baker); Cuernos Mts, Negros, 1 ♂, 1 ♀ (Baker); Lamao, Luzon, 1 ♀, 3-6.ii (C. B. Piper); Imugan, Luzon, 1 ♀; San Jose, Mindoro, ii. 1945 (F. E. Skinner); Albay Prov., Mt Mayon, 16 km N.W. of Lagospi, 900-1500 m, 5 ♂, 4-17.v.1962 (H. M. Torrevillas); Negros, L. Balinsayao, 3 ♂, 1 ♀, 1-7.x.1959 (L. W. Quate); Negros, Mt Talinas, 1000 m, 1 ♂, 29-31.xii.1960 (H. Torrevillas); Mindanao, Agusan, Los Arcos, 1 ♀, 19-23.xi.1959 (L. W. Quate).

BIOLOGY. Unknown. Collection records indicate that the species is prevalent from May to December in the Philippines.

REMARKS. *Tharra maculiceps* is one of the few species of *Tharra* that has a median longitudinal carina on the clypeus. From *rufivena*, its nearest relative, *maculiceps* can be separated by the depressed, carinate crown and the pygofer with apical enlarged subencapsulated pygofer process.

***Tharra knighti* sp. n.**

(Text-figs 119-123)

Length: ♂ 4.30-4.70 mm, ♀ unknown.

General colour piceous, sometimes with small ivory spots on elytra. Crown piceous with small ochraceous area on disk between eyes; eyes luminous; pronotum and scutellum piceous; elytra piceous with small ivory spots on cells; clypeus and clypellus piceous.

Head narrower than pronotum; crown narrow, produced distally beyond anterior margin of eyes, distal length less than one-fourth entire median length, striate radially, slightly carinate laterally, lateral margins converging basally, disk depressed medially, elevated above eyes; ocelli small, situated anteriorly; eyes large, bulbous laterally, occupying nearly two-thirds of entire dorsal area of head; pronotum short, median length less than median length of crown; scutellum large, median length greater than median length of pronotum; elytra elongate, veins distinct, appendix well developed, venation as in description of genus; clypeus long, anteriolateral margins slightly wider than posteriolateral margins, constricted medially with a prominent median longitudinal carina reaching just below the antennal sockets, surface finely granulose, rugulose along anterior margin; clypellus with lateral margins nearly parallel, slightly divergent apically.

Male pygofer in lateral aspect with long, narrow, curved process arising caudoventrally, process finely striate at apical half; aedeagus simple, without spines; dorsal appendage narrowed

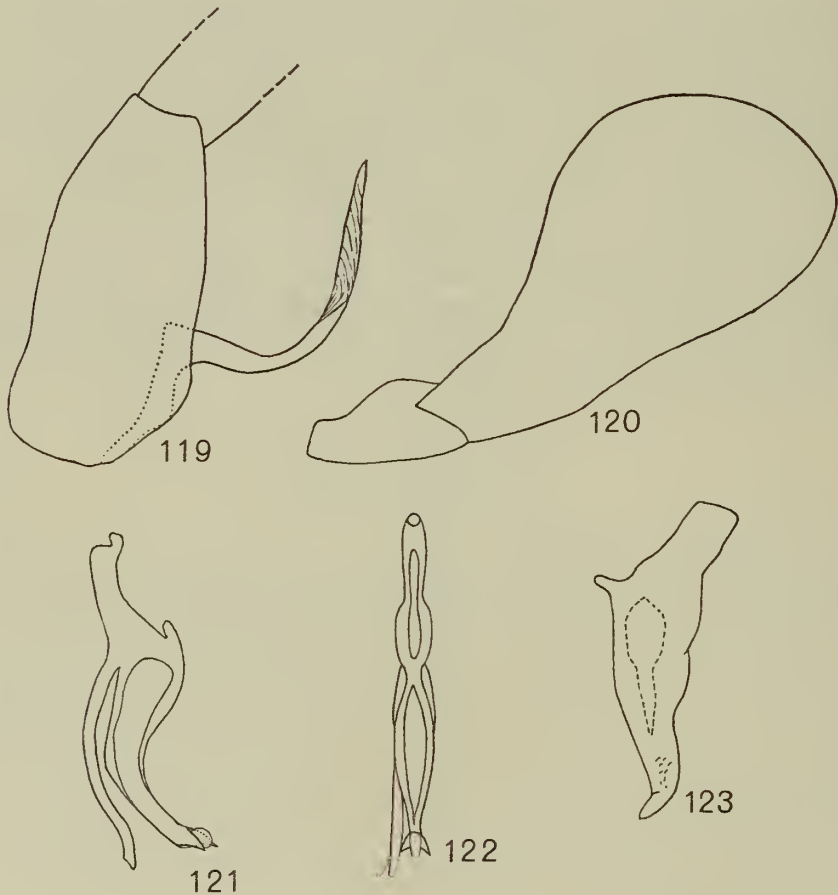
at apical half, small inflated flange apically between two apical short lateral projections; ventral appendage narrow, tube-like, reaching apex of dorsal appendage; gonopore apical; connective Y-shaped; style narrowed and curved apically, not clawed; plate with distal segment elongate, inflated subapically on dorsal margin.

SPECIMENS EXAMINED.

Holotype ♂, NEW GUINEA: Cyclops Mts, Sabron, 930 ft, v. 1936 (*L. A. Cheesman*) (BMNH, London).

Paratypes. NEW GUINEA: 10 km E. of Bokondini, 40 km N. of Balien Valley, 1300 m, 1 ♂, 24.xi.1961 (*S. Quate*) (BPBM, Honolulu); Waris, S. Hollandia, 450-500 m, 1 ♂, 1-17.viii.1959 (*T. C. Maa*), in author's collection.

BIOLOGY. Unknown. Collection records indicate that this species is prevalent from May to November.



FIGS 119-123. *Tharva knighti* sp. n. 119, male pygofer, lateral view; 120, plate, lateral view; 121, aedeagus, lateral view; 122, aedeagus, dorsal view; 123, style, lateral view.

REMARKS. This species is closely related in general habitus to *ventriosa* and can be separated from the latter species by the dorsal appendage with the apical half narrowed and with a small, inflated flange apically between two sharp apices on either side.

This species is named for Dr W. J. Knight of the British Museum (Natural History).

Tharra ventriosa sp. n.

(Text-figs 124-128)

Length: ♂ 4.00-4.15 mm, ♀ 5.00 mm.

General colour of ♂ as in *knighti*; sexual dimorphism apparent. Female general colour ochre and dark brown with numerous translucent ivory spots in cells of elytra. Crown piceous with ochre basally in ♂, completely ochraceous in ♀; eyes fuscous; pronotum and scutellum piceous in ♂, ochre in ♀; elytra piceous with a few small ochraceous spots on elytra in ♂, light fuscous with numerous ivory spots in cells in ♀; clypeus and clypellus piceous in ♂, ochre in ♀.

Head narrower than pronotum, crown narrow, produced distally beyond anterior margin of eyes, distal length short, less than one-third entire median length, striate radially, slightly carinate laterally, slightly depressed medially, lateral margins convergent basally, disk elevated above eyes; ocelli small, situated anteriorly; eyes large and bulbous, occupying over two-thirds entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus long, anteriolateral margins broader than posteriolateral margins, with prominent median longitudinal carina reaching just beyond antennal sockets, surface finely granulate, anterior margin rugulose; clypellus with lateral margins expanded apically.

Male pygofer in lateral aspect with long, narrow, curved process, process not equidistant throughout, slightly broader basally and slightly enlarged apically, apex aperturized; aedeagus in lateral aspect with dorsal appendage broad at basal half, subapical flange on ventral margin; ventral appendage tube-like, reaching apex of dorsal appendage; gonopore apical; connective Y-shape, style as in *knighti*; plate as in *knighti*.

Female seventh sternum produced posteriorly on middle of caudal margin.

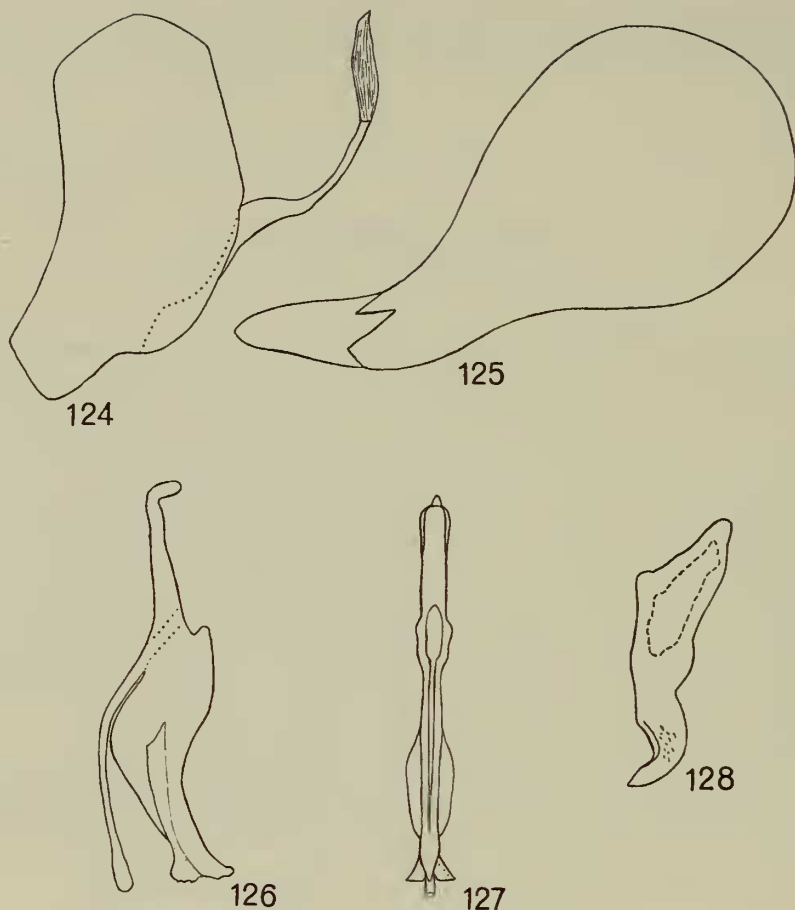
SPECIMENS EXAMINED.

Holotype ♂, PHILIPPINES: Adm. I., Los Negros, on small broad-leaf herbaceous plants, 9.iv.1945 (*P. T. Riherd*) (USNM, Washington).

Paratypes. PHILIPPINES: allotype ♀, same data as holotype (USNM, Washington) 1 ♂, same data as holotype (USNM, Washington). BISMARCK ARCHIPELAGO: Rossun, 6 km S.E. of Lorengau, 180 m, 1 ♂, 23.xii.1959 (*T. C. Maa*); New Britain, Gazelle Pen., Kerovat, 60 m, 1 ♂, 29.viii.1955 (*J. L. Gressitt*) (BPBM, Honolulu); Manus, Lorengau, 1 ♂, 21.vi.1962 (*Noona Dan Expn*, 61-62) (UZM, Copenhagen); 1 ♂, same data as holotype, in author's collection.

BIOLOGY. This species was collected from unidentified herbaceous plants in the Philippines. Collection records indicate that the species is prevalent from June to December.

REMARKS. From *knighti*, to which it is similar in general habitus, *ventriosa* can be distinguished by the dorsal appendage of the aedeagus with the ventral subapical flange.



FIGS 124-128. *Tharra ventriosa* sp. n. 124, male pygofer, lateral view; 125, plate, lateral view; 126, aedeagus, lateral view; 127, aedeagus, dorsal view; 128, style, lateral view.

***Tharra picta* (Montrouzier) comb. n.**

(Text-figs 129-133)

Coelidia picta Montrouzier, 1861 : 74. LECTOTYPE ♀, LOYALTY Is.: Lifou (NM, Vienna), here designated [examined].

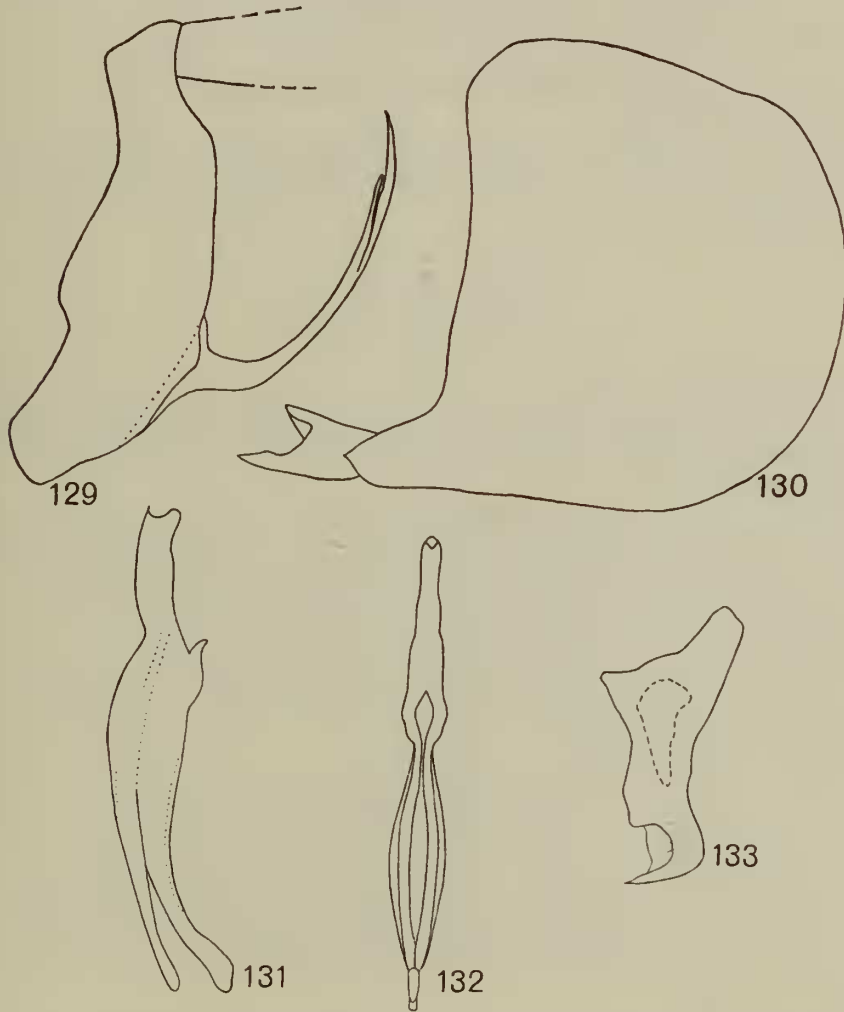
Coelidia picta Montrouzier; Metcalf, 1964 : 70.

General colour piceous with light brown markings on elytra. Crown ochre; pronotum and scutellum piceous in ♂, light brown to fuscous in ♀; elytra piceous with light brown area at apex of clavus; clypeus and clypellus piceous in ♂, light brown in ♀.

Head narrower than pronotum; crown short, produced distally slightly beyond anterior margin of eyes, distal length less than one-third entire median length of crown, striate radially, slightly depressed medially, lateral margins convergent basally, disk elevated above eyes; ocelli small, situated laterally; eyes large, occupying nearly two-thirds of entire dorsal area of head; pronotum long, median length greater than median length of crown; scutellum large,

median length slightly greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in generic description; clypeus long, very broad anteriorly, narrowed posteriorly, slightly depressed on anterior half, surface rugulose on anterior half, finely granulose on posterior half, median carina absent; clypellus with lateral margins nearly parallel basally, slightly convergent apically.

Male pygofer in lateral aspect with long, narrow curved process arising from caudoventral margin, process with secondary spine arising distad of middle, apex of primary and secondary processes sharply attenuated apically; aedeagus in lateral aspect simple, without processes or spines; dorsal appendage of aedeagus attenuated at apical half, slightly expanded apically; ventral appendage tube-like, barely reaching apex of dorsal appendage; gonopore apical;



FIGS 129-133. *Tharva picta* (Montrouzier). 129, male pygofer, lateral view; 130, plate lateral view; 131, aedeagus, lateral view; 132, aedeagus, dorsal view; 133, style, lateral view.

connective Y-shaped; style clawed apically; plate with distal segment subquadrate, anterior margin truncate.

Female seventh sternum with posterior margin produced medially.

DISTRIBUTION. New Caledonia, Loyalty Islands.

SPECIMENS EXAMINED.

Coelidia picta Montrouzier, lectotype ♀, LOYALTY IS.: Lifou (NM, Vienna).

NEW CALEDONIA: Col d'Amieu, 130 km N. of Noumea, 350–650 m, 2 ♂, 1 ♀, 13.xi.1963 (*R. Straatman*); Riviere Bleue (Yate) 35 km S.E. of Noumea, 160–180 m, 2 ♂, 14.xi.1963 (*R. Straatman*); Col d'Amieu, 650 m, 3 ♂, 2 ♀, 31.iii.1968 (*J. L. Gressitt and T. C. Maa*); Plateau do Dogny, 1 ♀, 29.iii.1968 (*T. C. Maa*); Col des Pirogue, 2 ♂, 14.ii.1963 (*C. M. Yoshimoto*); Mts des Koghis, 400–600 m, 9 ♂, 7 ♀, 1. 1969 (*N. L. H. Krauss*).

BIOLOGY. Unknown. Collection records indicate that the species is prevalent from November to March.

REMARKS. This species is similar in general habitus to *ventriosa* but can be separated from the latter by the pygofer with the secondary process and the subquadrate plate.

Tharra spinulata sp. n.

(Text-figs 134–138)

Length: ♂ 4.60 mm, ♀ 5.20 mm.

General colour piceous to light brown. Crown ochre in ♂, ochre suffused with fuscous on disk in ♀; eyes greenish grey; pronotum and scutellum piceous; elytra piceous with a narrow ochraceous band at apex, slightly suffused with brown subapically along appendix; clypeus and clypellus ochraceous.

Head narrower than pronotum; crown long, produced distally beyond anterior margin of eyes, distal length about one-third entire median length of crown, striate radially, lateral margins nearly parallel, disk elevated considerably above level of eyes; ocelli small, situated anteriorly; eyes moderate size, occupying about one-half entire dorsal surface of head; scutellum with short, median carina anteriorly, median length less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus long, anterior margin broad, constricted near antennal sockets, without median longitudinal carina, surface finely granulose, anterior margin narrowly rugulose; clypellus with lateral margin constricted medially.

Male pygofer in lateral aspect with long, straight process, process with short, subbasal spine and one small, curved spine subapically, subbasal spine directed dorsad, subapical spine directed ventrad; aedeagus in lateral aspect with a pair of long lateral spines near middle of dorsal margin of dorsal appendage; dorsal appendage constricted subapically, curved apically; ventral appendage tube-like with small, subapical flange on dorsal margin, apex of ventral appendage reaching apex of dorsal appendage; gonopore apical; connective Y-shape; style clawed apically; plate with distal segment elongate with dorsal margin expanded medially.

Female seventh sternum with posterior margin expanded medially.

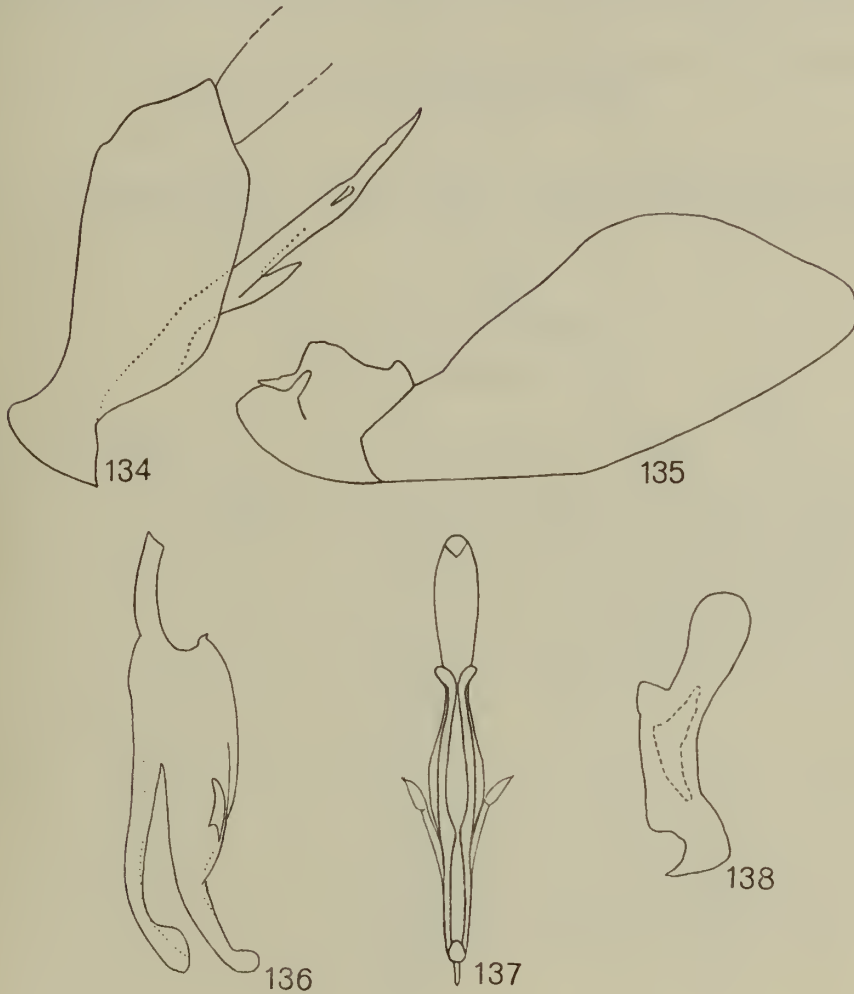
SPECIMENS EXAMINED.

Holotype ♂, MOLUCCAS: Ambon (*F. Muir*) (BPBM, Honolulu).

Paratypes. MOLUCCAS: allotype ♀, Ambon, vi. 1908 (*F. Muir*) (BPBM, Honolulu); 1 ♂, same data as holotype, in author's collection.

BIOLOGY. Unknown.

REMARKS. This species is similar to *picta* in general habitus and characters of male pygofer but can be separated from the latter by the presence of a short, median carina on the pronotum and a pair of long spines on the dorsal appendage of the aedeagus.



FIGS 134-138. *Tharra spinulata* sp. n. 134, male pygofer, lateral view; 135, plate, lateral view; 136, aedeagus, lateral view; 137, aedeagus, dorsal view; 138, style, lateral view.

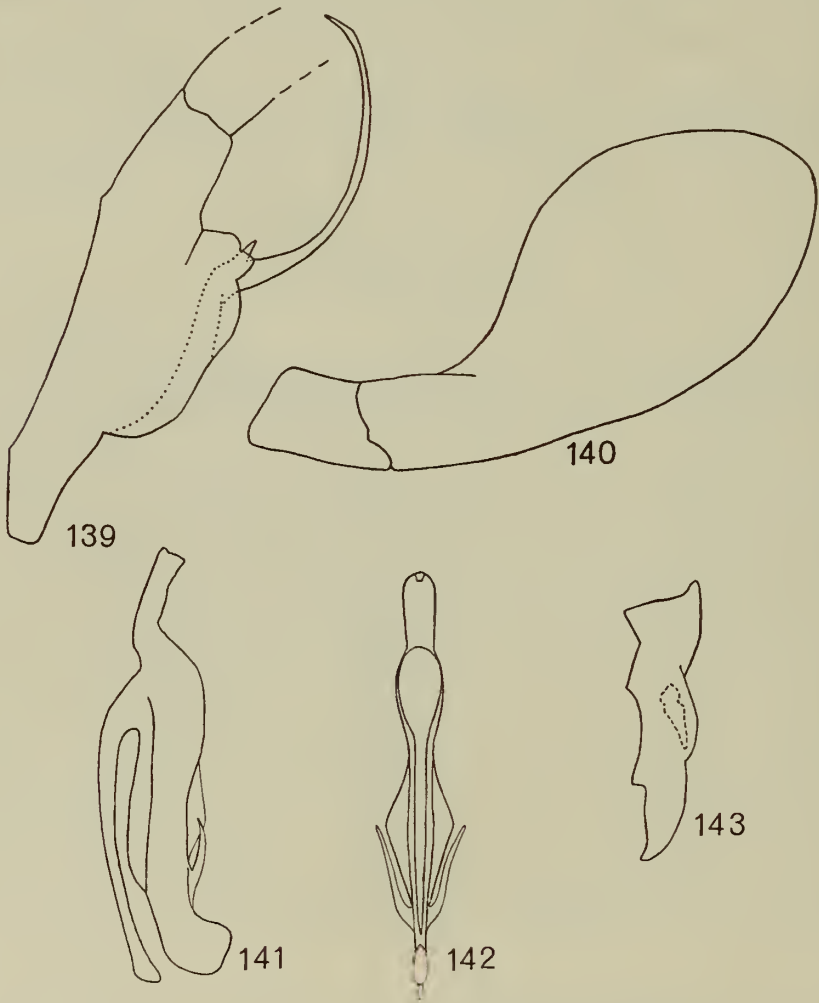
Tharra biclades sp. n.

(Text-figs 139-143)

Length: ♂ 4.60 mm, ♀ unknown.

General colour piceous with small, pale ochraceous spots on elytra.

Head narrower than pronotum; crown long, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, slightly carinate laterally, slightly depressed medially, lateral margins slightly convergent basally, disk elevated above eyes; ocelli small, situated anteriolaterally; eyes large, elongate, occupying over one-half entire dorsal area of head; pronotum short, median length less than median length of crown; scutellum large, median length greater than median length of pronotum; elytra elongate,



FIGS 139-143. *Tharra biclades* sp. n. 139, male pygofer, lateral view; 140, plate, lateral view; 141, aedeagus, lateral view; 142, aedeagus, dorsal view; 143, style, lateral view.

veins semiprominent, appendix well developed, venation as in description of genus; clypeus long, slightly broader anteriorly than posteriorly, constricted near antennal sockets, remnants of median longitudinal carina present, surface finely granulose, anterior margin rugulose; clypellus with lateral margins parallel.

Male pygofer in lateral aspect with long, curved process arising from near caudodorsal margin, process with small, short, secondary spine subbasally; aedeagus in lateral aspect with a pair of very long, distinct spines on dorsal margin of dorsal appendage, situated basad of apex; dorsal appendage very broad throughout, apex subquadrate; ventral appendage tubelike, apex reaching apex of dorsal appendage; gonopore apical; connective Y-shaped; style not clawed apically, slightly curved.

SPECIMEN EXAMINED.

Holotype ♂, NEW GUINEA: W. Highlands, Goiburung, E. of Korn Farm, 1560-1650 m, 16.X.1968 (*J. L. Gressitt*) (BPBM, Honolulu).

BIOLOGY. Unknown.

REMARKS. From *spinulata*, to which it is similar in genital characteristics, *bicladus* can be distinguished by the presence of a subapical spine on pygofer process.

Tharra bicornipes sp. n.

(Text-figs 144-148)

Length: ♂ 5.15 mm, ♀ unknown.

General colour piceous. Crown fuscous; eyes light brown; pronotum, scutellum and elytra piceous; clypeus and clypellus piceous.

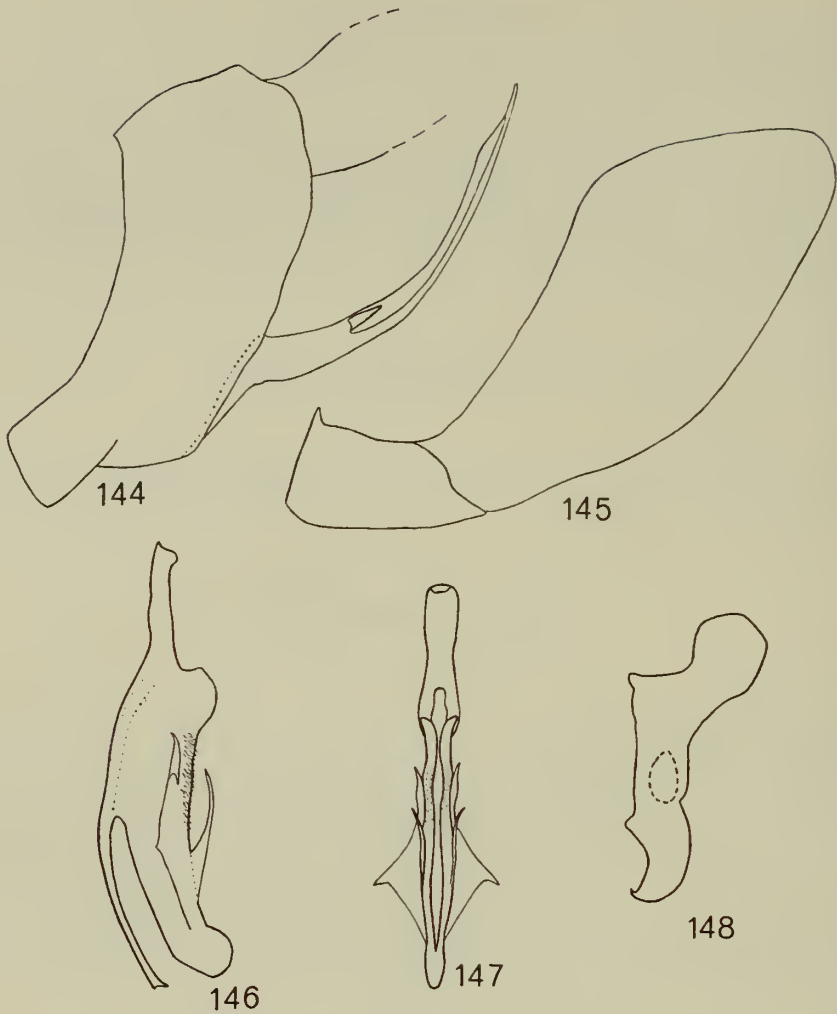
Head narrower than pronotum; crown long, narrow, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, slightly carinate laterally, depressed slightly medially, lateral margins nearly parallel, disk elevated above eyes; ocelli small, situated anteriolaterally; eyes large, semiglobular, occupying over one-half entire dorsal area of head; pronotum short, median length less than median length of crown, surface minutely knobbed; scutellum medium size, median length only slightly longer than median length of pronotum; elytra elongate, veins prominent, venation as in generic description, appendix well developed; clypeus broad anteriorly, narrowed posteriorly, without median longitudinal carina, surface finely granulose, rugulose on anterior margin, clypellus with lateral margins broadly divergent apically.

Male pygofer in lateral aspect with long curved process arising caudoventrally, process with short, stubby subbasal spine and aperturized on inner lateral margin at apical half; aedeagus in lateral aspect with dorsal appendage with numerous minute spines subbasally on dorsal margin, two pairs of long spines and a large lateral flange on each side, one pair of long spines arising subapically on dorsal margin and projecting anteriorly, a subbasal pair arising laterally and projecting anteriorly, flange triangulate on each side in dorsal view with short lateral projection; dorsal appendage broad throughout; ventral appendage narrow, tube-like, reaching apex of dorsal appendage; gonopore apical; connective Y-shape; style clawed apically; plate with distal segment elongate, broadly lanceolate.

SPECIMENS EXAMINED.

Holotype ♂, NEW GUINEA: E. end Saruwaged Rd, 20 km S.S.W. Kabwum, 2550 m, Malaise Trap, 5-12.viii.1966 (BPBM, Honolulu).

BIOLOGY. Unknown.



FIGS 144-148. *Tharra bicornipes* sp. n. 144, male pygofer, lateral view; 145, plate, lateral view; 146, aedeagus, lateral view; 147, aedeagus, dorsal view; 148, style, lateral view.

REMARKS. From *biclades*, to which it is similar in genital characteristics, *bicornipes* can be distinguished by the two pairs of long spines and broad lateral triangulate flange on the dorsal appendage of the aedeagus.

***Tharra insoluta* sp. n.**

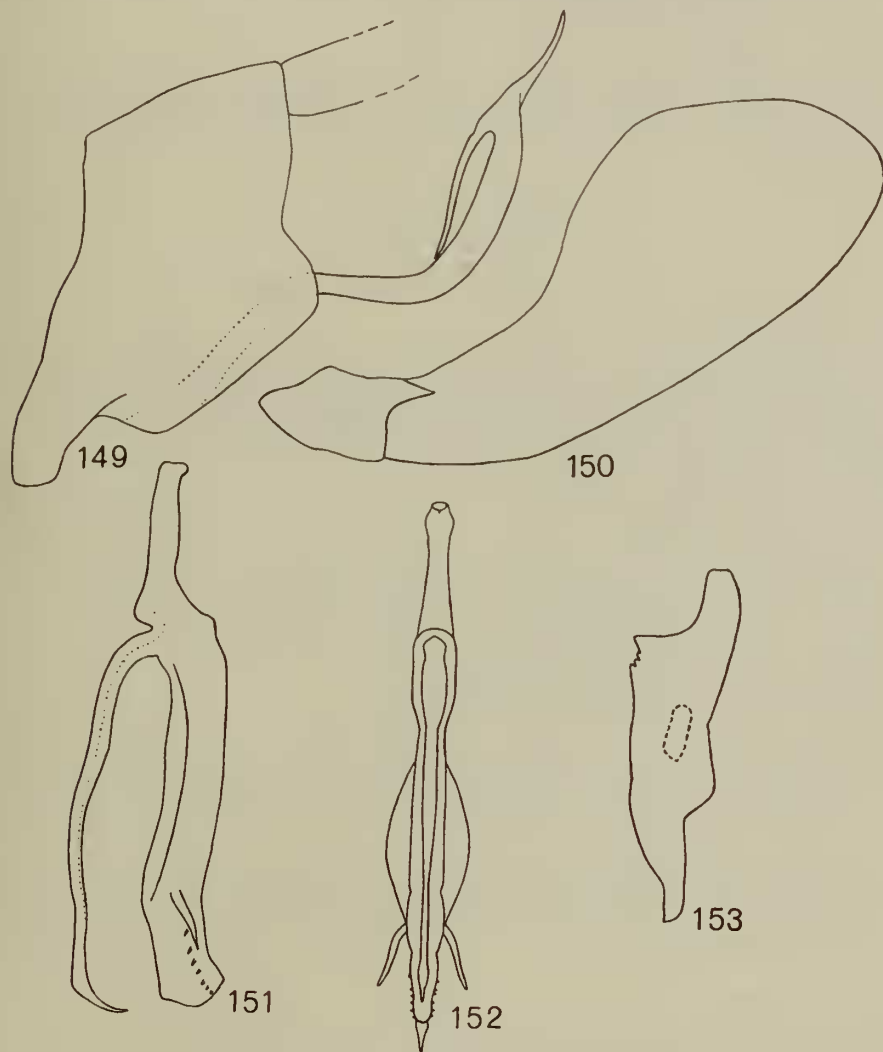
(Text-figs 149-153)

Length: ♂ 4.93 mm, ♀ unknown.

General colour light brown. Crown fuscous apically, ochraceous basally; eyes fuscous; pronotum and scutellum ochraceous; elytra fuscous with small ochraceous spots laterally and

apically, ochraceous along clavus; clypeus deep fuscous anteriorly, ochraceous posteriorly; clypellus light ochraceous.

Head narrower than pronotum; crown long, narrow, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, lateral margins slightly convergent basally, a small depression on each side of middle between eyes, disk elevated above eyes; eyes large, occupying over half of dorsal area of head; pronotum short, median length less than median length of crown; scutellum moderate size, median length slightly greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in generic description; clypeus long, lateral margins nearly parallel constricted near antennal sockets, without median longitudinal carina, surface finely granulose rugulose along anterior margin; clypellus with lateral margins slightly concave.



FIGS 149-153. *Tharva insoluta* sp. n. 149, male pygofer, lateral view; 150, plate, lateral view; 151, aedeagus, lateral view; 152, aedeagus, dorsal view; 153, style, lateral view.

Male pygofer in lateral aspect with long curved process arising caudoventrally, process terminating in a long sharp curved spine apically and a long sharp curved spine subapically which projects ventrally; aedeagus in lateral aspect with a pair of lateral spines subapically, a subapical row of very short spines laterally and a long membranous flange laterally on the dorsal appendage; dorsal appendage broad throughout; ventral appendage narrow, tube-like, slightly sinuate, sharply pointed and curved apically, apex of ventral appendage reaching apex of dorsal appendage; gonopore apical; connective Y-shaped; style not clawed, narrowed apically; plate with distal segment elongate, dorsal margin expanded subapically.

SPECIMENS EXAMINED.

Holotype ♂, NEW GUINEA: Swart Val., W. Fork, 1300–1350 m, 17.xi.1958 (*J. L. Gressitt*) (BPBM, Honolulu).

BIOLOGY. Unknown.

REMARKS. This is a rare species known only from the holotype male. The unusual apical spines on the pygofer process will separate this species from *arca*, its closest relative.

Tharra arca sp. n.

(Text-figs 154–158)

Length: ♂ 4.46–4.62 mm, ♀ 5.00 mm.

General colour ochraceous, with lateral half of elytra fuscous. Crown, pronotum and scutellum ochraceous; eyes fuscous; elytra with clavus and surrounding lateral area ochraceous, lateral margins and apex fuscous, with fuscous and ochraceous admixture within cells, veins deep fuscous; clypeus and clypellus ochraceous to light fuscous.

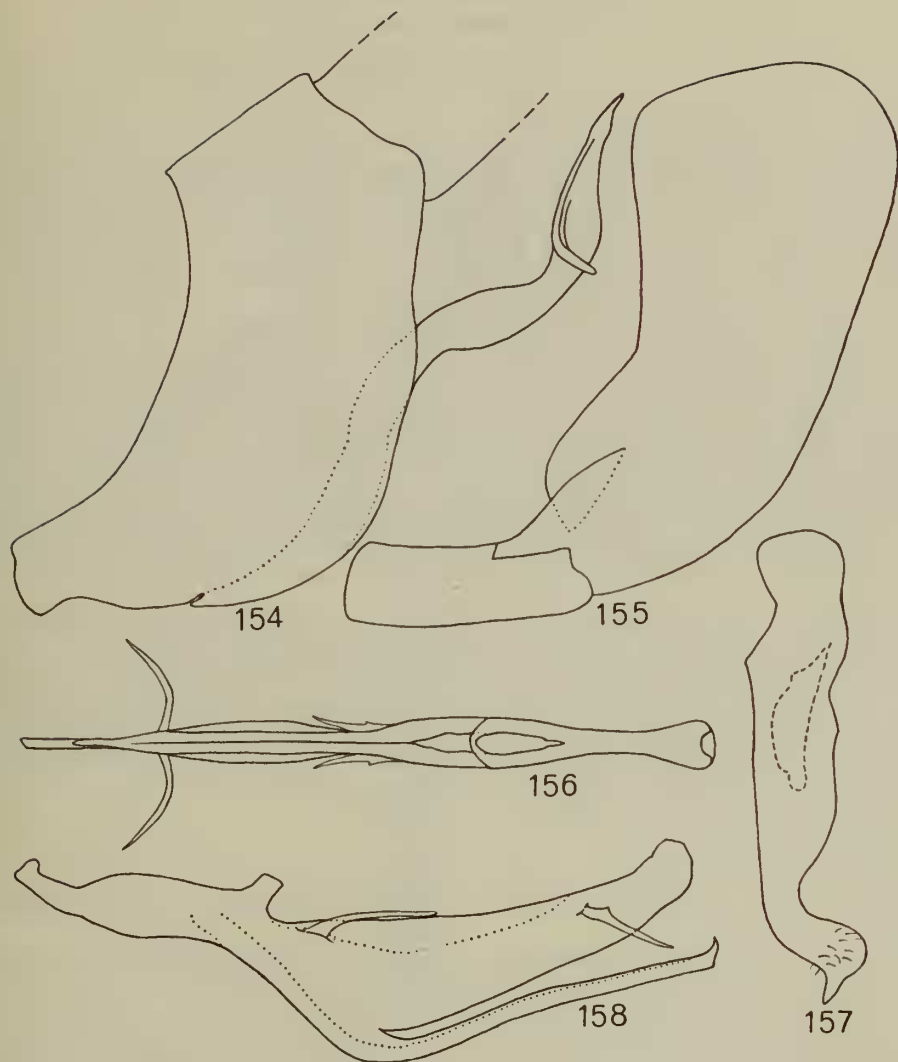
Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, slightly carinate laterally, lateral margins slightly convex, slight depression medially, disk elevated above eyes; ocelli small, situated anteriorly; eyes large, elongate, occupying about two-thirds entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus long, lateral margins nearly parallel, constricted near antennal sockets, without median longitudinal carina, surface finely granulose, anterior margin narrowly rugulose; clypellus with lateral margins slightly concave.

Male pygofer in lateral aspect with large, curved process arising from caudoventral margin, process somewhat sinuate, lateral margins nearly equidistant with small, curved, subapical secondary process laterally on inner margin, directed caudoventrally; aedeagus in lateral aspect with dorsal appendage broad throughout; dorsal appendage with two pairs of long, prominent spines, one pair basally on dorsal margin, one pair subapically on lateral margin, apex curved dorsad; ventral appendage long, very narrow, tube-like, reaching apex of dorsal appendage; gonopore apical, connective Y-shaped; style not clawed apically, curved laterally subapically with small projection apically; plate with distal segment elongate, directed dorsad with anterior margin deeply excavated.

SPECIMENS EXAMINED.

Holotype ♂, NEW GUINEA: Mt Kaindi, 2350 ft, 23.iii.1966 (*J. L. Gressitt*) (BPBM, Honolulu).

Paratypes. NEW GUINEA: allotype ♀ [abdomen missing], Edie Ck., Wau, 2050 m,



FIGS 154-158. *Tharva arca* sp. n. 154, male pygofer, lateral view; 155, plate, lateral view; 156, aedeagus, dorsal view; 157, style, lateral view; 158, aedeagus, lateral view.

31.iii.1966 (*J. L. Gressitt*) (BPBM, Honolulu); Mt Kaindi, 2350 m, 1 ♂, 1.v.1966 (*J. L. Gressitt*), in author's collection.

BIOLOGY. Unknown.

REMARKS. *Tharva arca* is very similar to *insoluta* in male genital characteristics and can be separated from the latter species by the presence of two pairs of spines on the dorsal appendage of the aedeagus.

Tharra solomonensis sp. n.

(Text-figs 159-163)

Length: ♂ 4.40-4.70 mm, ♀ 5.10-5.60 mm.

General colour ochraceous, elytra fuscous except for clavus, which is either ivory or ochraceous; sexual dimorphism apparent. Crown ochraceous in ♂, ochraceous in ♀ with some fuscous spots; pronotum ochraceous along middle, lateral angles fuscous; scutellum ochraceous, lateral angles fuscous; elytra with clavus ochraceous in ♂, ochraceous to ivory in ♀ with fuscous markings, remainder of elytra fuscous throughout in ♂, fuscous with numerous ochraceous spots in ♀, clypeus ochraceous in ♂, ochraceous in ♀ with fuscous bands posteriorly and anteriorly; clypellus ochraceous in ♂, fuscous in ♀.

Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, deeply depressed along middle, lateral margins somewhat carinate and slightly convergent basally; ocelli large, situated anteriorly; eyes large, occupying nearly two-thirds entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum moderate size, median length slightly greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, somewhat tapered posteriorly, lateral margins distinctly excised at antennal sockets, median longitudinal carina absent in ♂, faintly present in ♀, surface finely granulose, rugulose along anterior margin; clypellus with lateral margins broadly concave.

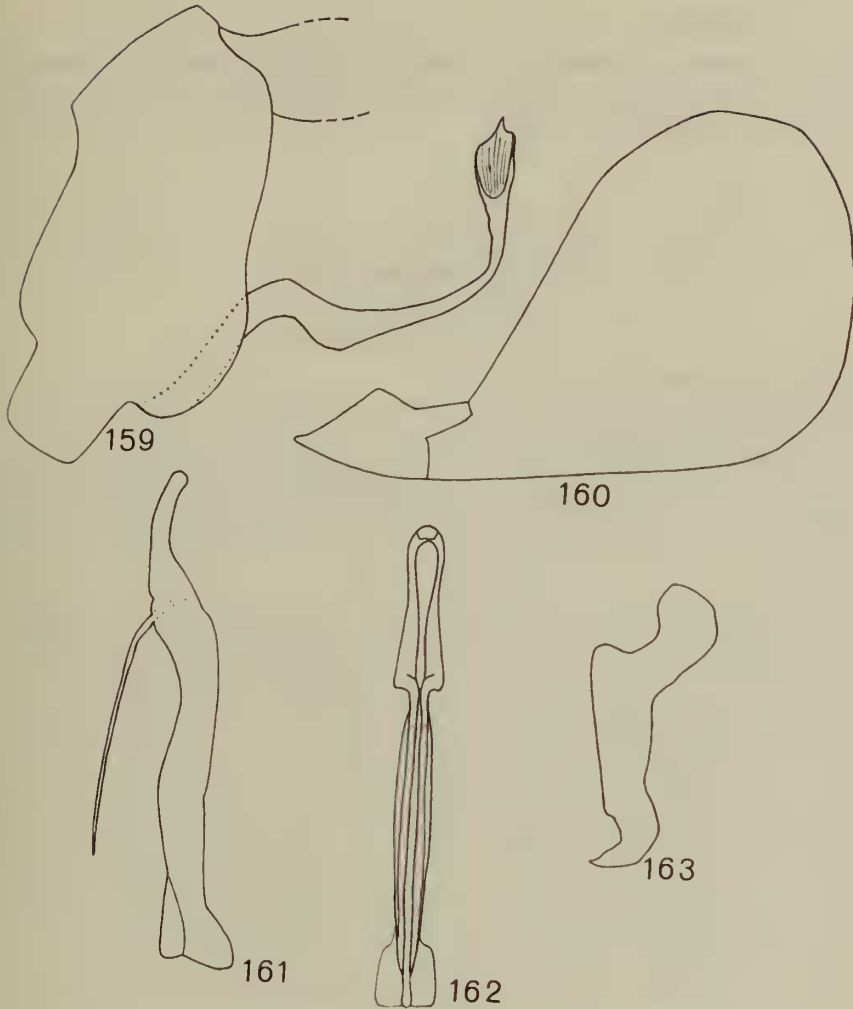
Male pygofer in lateral aspect with long, narrow process arising from caudoventral margin, process somewhat sinuate and irregularly curved, aperturized apically with several striations at apex; aedeagus in lateral aspect with dorsal appendage very broad throughout, somewhat sinuate, apex slightly curved dorsad; dorsal appendage with ventral apical flange; ventral appendage very long, needle-like, apex basad of apex of dorsal appendage; gonopore apical; connective Y-shaped; style hooked apically; plate with distal appendage short and extremely broad, almost subquadrate.

Female seventh sternum with posterior margin somewhat truncate.

SPECIMENS EXAMINED.

Holotype ♂, SOLOMON IS.: Rennell I., Hutuna, 8.xi.1953 (*J. D. Bradley*) (BMNH, London).

Paratypes. SOLOMON IS.: allotype ♀, same data as holotype (BMNH, London); 2 ♂, 2 ♀, same data as holotype, in author's collection; Rennell I., Hutuna, 20 ♂, 3 ♀, 8.vi.1953 (*J. D. Bradley*); Rennell I., Teuhungano, 40 ♂, 1 ♀, 14.x.1953 (*J. D. Bradley*); Rennell I., Tigoa, 2 ♂, 3 ♀, 9-11.xi.1953 (*J. D. Bradley*); Rennell I., Kasipa Hill, 300 ft, 1 ♂, 29.x.1953 (*J. D. Bradley*); Rennell I., Niupani, 2 ♀, 22.xi.1953 (*J. D. Bradley*); Bellona I., Matahenua, 1 ♂, 29-30.xi.1953 (*J. D. Bradley*); Malaita, Sikana I., 1 ♂, 3 ♀, 10.vi.1963 (*M. McQuillan*); Isabel, Tasia, 1 ♀, 20.i.1955 (*M. McQuillan*); Kolombangara, Pepele, 30 m, 1 ♂, 3 ♀, 13.ii.1964 (*T. Shanahan*) (BPBM, Honolulu); Nupani, Reef I., 2 ♀, 8.v.1933 (*M. Willows, Jr*) (CAS, San Francisco); Rennell I., Teuhungano, 1 ♂, 1 ♀, 14.x.1953 (*J. D. Bradley*) (USNM, Washington). NEW HEBRIDES: Malekula, 2 ♀, i. 1930 (*L. E. Cheesman*); Espiritu Santo, Hog Harbor, 1 ♀, viii. 1925 (*P. A. Buxton*) (BMNH, London); Efate I., Beach, 1 ♀, 23.ii.1964 (*R. Straatman*); Espiritu Santo I., 15 km N.E. Luganville, 2 ♀, 11.iii.1964 (*R. Straatman*) (BPBM, Honolulu). BISMARCK ARCHIPELAGO: Mussau, Bollu, 1 ♂, 4.vi.1962 (*Noona Dan Expedition '61-62*) (UZM, Copenhagen); Manus I., Lorengau, 1-75 m, 1 ♀, 28.vi.1959 (*J. L. Gressitt*); Manus I., Momote,



FIGS 159-163. *Tharra solomonensis* sp. n. 159, male pygofer, lateral view; 160, plate, lateral view; 161, aedeagus, lateral view; 162, aedeagus, dorsal view; 163, style, lateral view.

1 ♀, 24.xii.1959 (*T. C. Maa*) (BPBM, Honolulu). NEW BRITAIN: Gazelle Peninsula, Mt Sinewit, 900 m, 3 ♂, 1 ♀, 5-14.xi.1962 (*J. Sedlacek*); Gazelle Peninsula, Upper Warangoi, 1250-1450 m, 1 ♂, 5.xii.1962 (*J. Sedlacek*); N. Coast, 600 m, 1 ♀, 24.xii.1956 (*E. J. Ford, Jr*). NEW GUINEA: Papua, Woodlark I., Murua, Kulumadau Hill, 1 ♀, 16-22.iv.1957 (*W. W. Brandt*); Papua, Normanby I., Wakaiuna, Sewa Bay, 1 ♀, 11-20.xi.1956 (*W. W. Brandt*) (BPBM, Honolulu); Papua, Mt Riu, Sudest I., 250-350 m, 2 ♂, 1 ♀, 1.ix.1956 (*L. J. Brass*); Papua, Mts between Agamonia and Ailuluai, Fergusson I., 900 m, 1 ♂, 3 ♀, 5-17.vi.1956 (*L. J. Brass*) (AMNH, New York).

BIOLOGY. Unknown.

REMARKS. *Tharra solomonensis* is a unique species, and can be separated from other species of *Tharra* by the combination of a needle-like ventral appendage of the aedeagus and subquadrate plate.

***Tharra robusta* sp. n.**

(Text-figs 164-168)

Length: ♂ 4.90-5.30 mm, ♀ 5.70-6.10 mm.

General colour ochraceous with elytra testaceous in ♂, elytra testaceous with numerous ivory spots in ♀; sexual dimorphism apparent.

Crown ochraceous with four small testaceous spots between eyes, spots sometimes absent in ♂; eyes light griseous to fuscous; pronotum ochraceous; scutellum light griseous to ochraceous; elytra deeply fuscous to testaceous in ♂, deeply fuscous to testaceous but with numerous ivory spots in cells in ♀, large ivory spot on clavus in ♀; clypeus and clypellus light griseous to ochraceous.

Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length about one-third entire median length; striate radially, lateral margins broadly convex, slightly carinate, disk elevated above eyes; ocelli moderate size, situated anteriorly; eyes large, occupying about two-thirds of entire dorsal area of head; pronotum long, median length greater than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins somewhat obscured, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, without median longitudinal carina, surface finely granulate, rugulose along anterior margin; clypellus with lateral margins broadly concave.

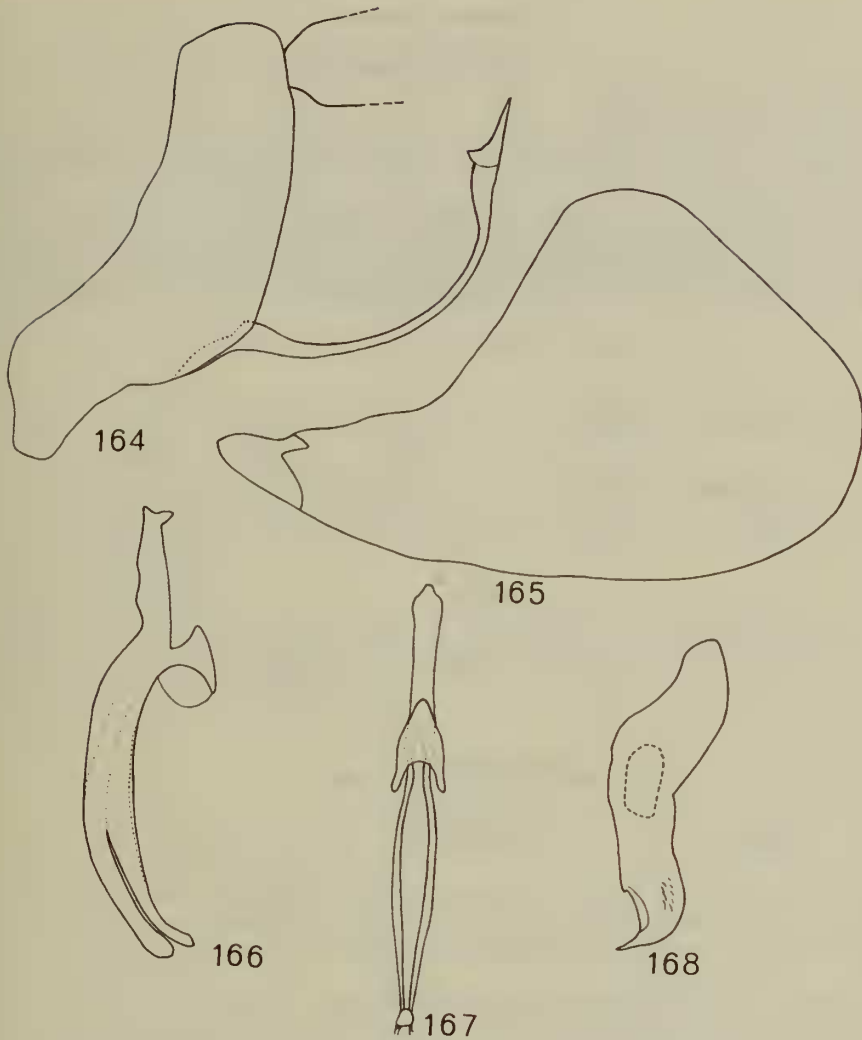
Male pygofer in lateral aspect with long, narrow, curved process arising from caudoventral margin, process broad basally, narrowed along middle, and slightly expanded apically, aperturized apically, apex sometimes broader than basal portion; aedeagus in lateral aspect with dorsal appendage narrow throughout, slightly attenuated and curved apically; dorsal appendage with distinct semicircular flange basally; ventral appendage short, narrowed tube-like, closely appressed to dorsal appendage, apex reaching apex of dorsal appendage; gonopore apical; connective Y-shaped; style hooked apically; plate with distal appendage very broad, subquadrate.

Female seventh sternum with posterior margin produced slightly medially.

SPECIMENS EXAMINED.

Holotype ♂, NEW CALEDONIA: Mt Des Kogis, 600-900 m, 19.iii.1968 (*T. C. Maa*) (BPBM, Honolulu).

Paratypes. NEW CALEDONIA: allotype ♀, same data as holotype (BPBM, Honolulu); 1 ♂, 14 ♀, same data as holotype; Vallee d'Amoa, 2 ♀, 7.ii.1963 (*C. M. Yoshimoto*); Bourail, 3 ♂, iii. 1959 (*N. L. H. Krauss*); Col des Pirogue, 1 ♂, 14.ii.1963 (*N. L. H. Krauss*); Yiambi, N.E. 500-700 m, 1 ♀, 14.x.1967 (*J. & M. Sedlacek*); between Plum and Yati, 2 ♂, 25.iii.1968 (*T. C. Maa*); Mt Panier Trail, 4 ♂, 8-9.ii.1963 (*N. L. H. Krauss*); Mt Panier, 500-1000 m, 2 ♀, 11.x.1967 (*J. Sedlacek*) (BPBM, Honolulu); Col des Roussettes, 450-550 m, 1 ♂, 4-6.ii.1963 (*J. L. Gressitt*); Mt Kogi, 500 m, 1 ♀, 15.ii.1963 (*C. M. Yoshimoto*) (BMNH, London); Mt Kogi,



FIGS 164-168. *Tharra robusta* sp. n. 164, male pygofer, lateral view; 165, plate, lateral view; 166, aedeagus, lateral view; 167, aedeagus, dorsal view; 168, style, lateral view.

500-700 m, 1 ♂, 1.xii.1963 (*R. Straatman*); Mt Kogi, 1 ♀, 19.ii.1963 (*N. L. H. Krauss*); Col des Pirogue, 1 ♂, 1 ♀, 14.ii.1953 (*N. L. H. Krauss*), in author's collection. LOYALTY Is.: nr We (Oue), 2-35 m, 1 ♂, 2 ♀, 26-28.iii.1968 (*T. C. Maa*) (USNM, Washington).

BIOLOGY. Unknown.

REMARKS. This is a unique species and can be separated from all others in the genus *Tharra* by the presence of a small, semi-circular flange basad of the dorsal appendage of the aedeagus.

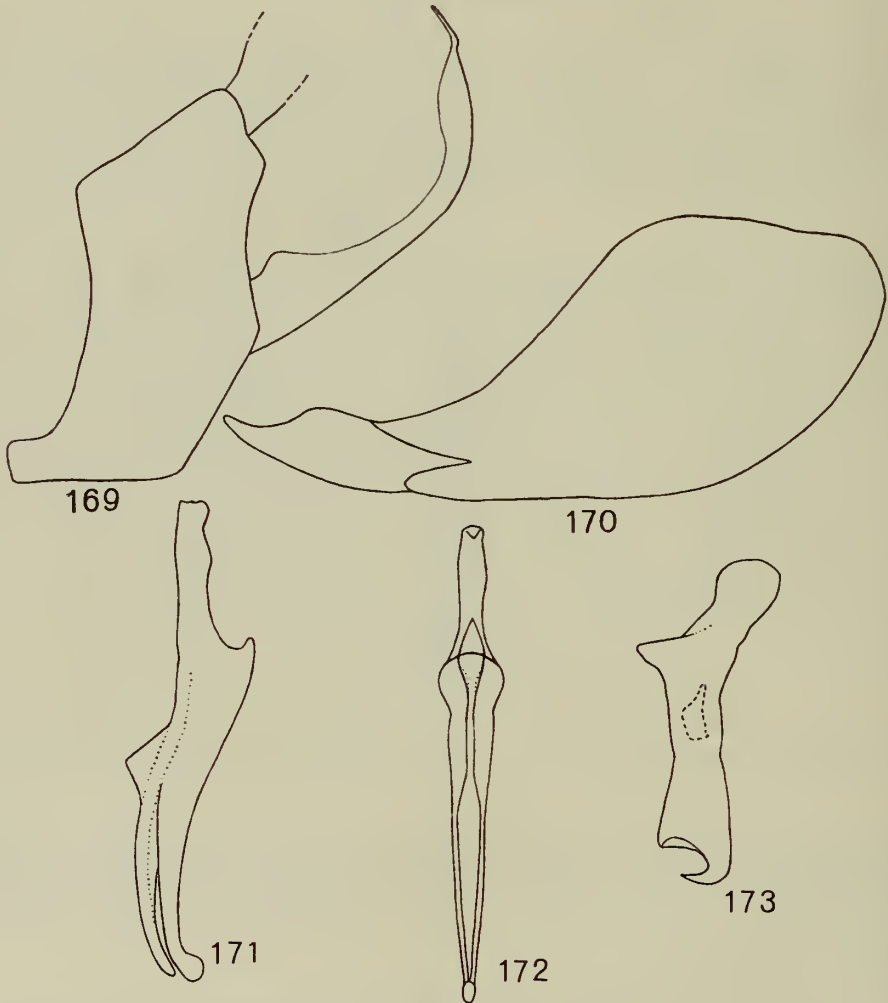
Tharra doni sp. n.

(Text-figs 169-173)

Length: ♂ 5.40 mm, ♀ 6.70 mm.

General colour deep fuscous to piceous. Crown ochraceous to rufous; eyes light rufous to deep rufous; pronotum and scutellum deep fuscous; elytra fuscous to piceous; clypeus and clypellus ochraceous.

Head considerably narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, lateral margins slightly convergent basally, disk elevated above eyes; ocelli small, situated anteriolaterally; eyes large, occupying nearly two-thirds entire dorsal area of head;



FIGS 169-173. *Tharra doni* sp. n. 169, male pygofer, lateral view; 170, plate, lateral view; 171, aedeagus, lateral view; 172, aedeagus, dorsal view; 173, style, lateral view.

pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length much greater than median length of pronotum; elytra elongate, veins indistinct, appendix well developed, venation as in description of genus; clypeus with anterior margin broad, constricted at basal half, without median longitudinal carina, surface finely granulose, rugulose on anterior margin; clypellus with lateral margins diverging apically.

Male pygofer in lateral aspect with long, curved process, process very broad basally, constricted subbasally, slightly broad medially and attenuated apically, inner lateral margin very fine, outer lateral margin somewhat sclerotized; aedeagus in lateral aspect with dorsal appendage somewhat attenuated, without spines or processes, slightly curved at apex; ventral appendage long, narrow, tube-like, with small keel ventrally; gonopore apical; connective Y-shaped; style clawed apically; plate with distal segment elongate, somewhat expanded subapically.

Female seventh sternum with posterior margin nearly truncate.

SPECIMENS EXAMINED.

Holotype ♂, NEW GUINEA: Tomba, slopes of Mt Hagen, 2500–2650 m, 24.v.1963 (*J. Sedlacek*) (BPBM, Honolulu).

Paratypes. NEW GUINEA: allotype ♀, Mt Giluwe, 2500–2750 m, 30.v.1963 (*J. Sedlacek*) (BPBM, Honolulu); Mt Giluwe, 2550 m, 1 ♂, 27.v.1963 (*J. Sedlacek*), in author's collection.

BIOLOGY. Unknown.

REMARKS. This is a unique species in the genus *Tharra* by having a keel on the ventral margin of the ventral appendage of the aedeagus, which separates it from its nearest relative, *grandis*.

Tharra grandis sp. n.

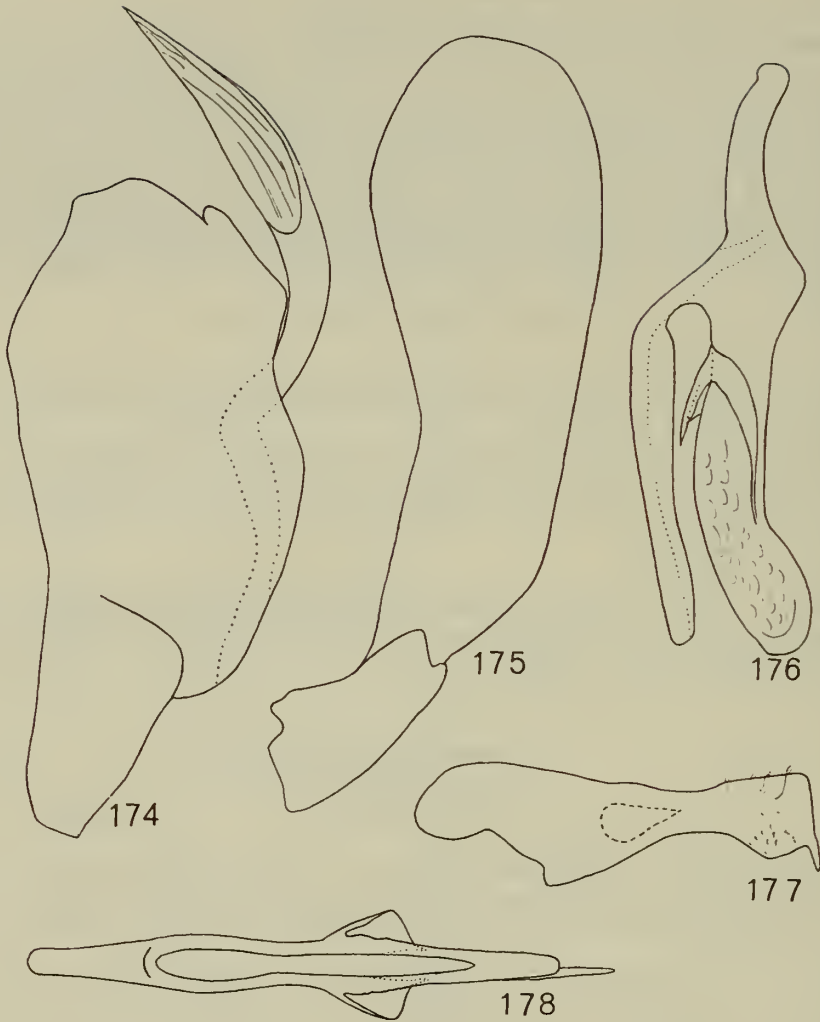
(Text-figs 174–178)

Length: ♂ 5.10 mm, ♀ unknown.

General colour piceous with numerous fine spots on elytra. Crown piceous except for small, ochraceous area near ocelli; eyes deep fuscous; pronotum and scutellum piceous; elytra piceous with numerous small ochraceous spots throughout, veins piceous; clypeus and clypellus piceous.

Head narrower than pronotum; crown long and broad, produced distally beyond anterior margin of eyes, distal length over one-third entire median length of crown, striate radially, lateral margins convex, disk elevated considerably above eyes; ocelli small, situated anteriorly; eyes moderate size, somewhat compressed laterally, occupying a little over half of the entire dorsal area of head; pronotum short, median length slightly less than median length of crown; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus long, without median longitudinal carina, lateral margins nearly parallel, constricted medially, somewhat swollen, surface finely granulose, anterior margin narrowly rugulose; clypellus with lateral margin nearly parallel.

Male pygofer in lateral aspect with large, curved process arising from caudoventral margin, process somewhat constricted basally, aperturized along inner lateral margin at subapical half, subapical half striate laterally; aedeagus in lateral aspect with dorsal appendage broad throughout, slightly swollen apically with a pair of large, sharp flanges subbasally on ventral margin; ventral appendage broad, reaching apex of dorsal appendage; gonopore apical; connective Y-shaped; style not clawed apically; apex truncate with small lateral spine apically; plate with distal segment elongate, slightly expanded subapically.



FIGS 174-178. *Tharra grandis* sp. n. 174, male pygofer, lateral view; 175, plate, lateral view; 176, aedeagus, lateral view; 177, style, lateral view; 178, aedeagus, dorsal view.

SPECIMENS EXAMINED.

Holotype ♂, NEW GUINEA: Wamena, 1700 m, 10-25.ii.1960 (*T. C. Maa*) (BPBM, Honolulu).

BIOLOGY. Unknown.

REMARKS. *Tharra grandis* is similar in male genital characteristics to *doni* and *arca* but can be separated from these species by the presence of a broad, sharp ventral flange on the dorsal appendage of the aedeagus.

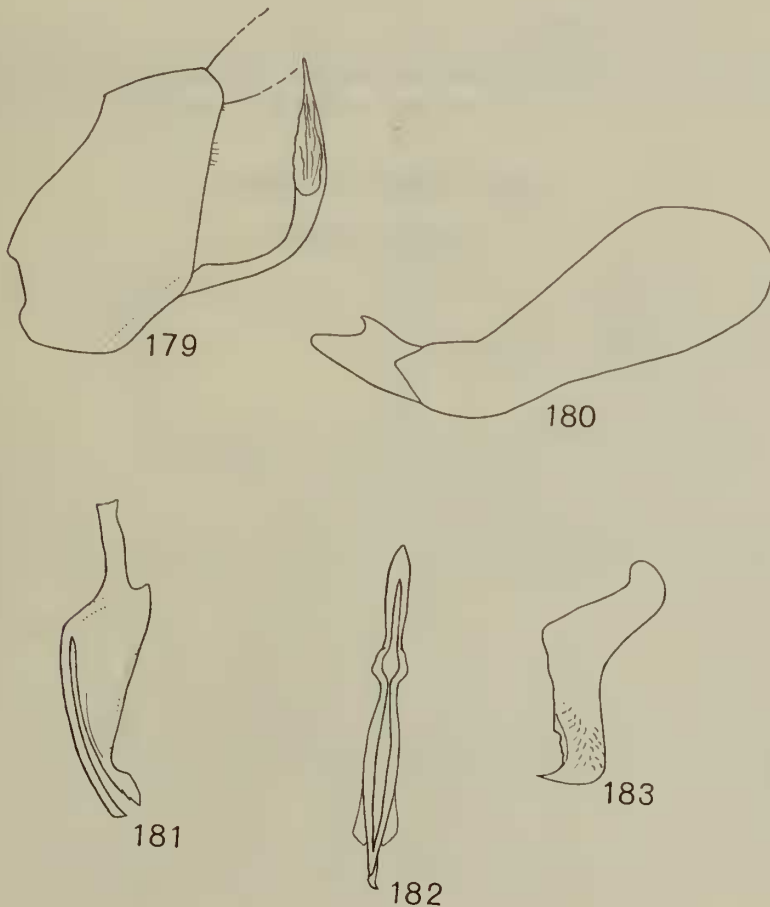
Tharra vesca sp. n.

(Text-figs 179-183)

Length: ♂ 3.30-3.60 mm, ♀ unknown.

General colour piceous. Crown piceous, lateral margin fringed with ochraceous; eyes ochraceous. Pronotum, scutellum and elytra piceous; veins on elytra deeply piceous; clypeus and clypellus piceous.

Head slightly narrower than pronotum; crown short and broad, produced slightly beyond anterior margin of eyes, distal length about one-quarter entire median length, striate radially, small depressed area on either side of middle, lateral margins nearly parallel, disk elevated above eyes; ocelli small, situated anteriorly; eyes large, somewhat bulbous, occupying about two-thirds entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum small, median length less than median length of pronotum; elytra elongate, veins somewhat obscured, appendix well developed, venation as



FIGS 179-183. *Tharra vesca* sp. n. 179, male pygofer, lateral view; 180, plate, lateral view; 181, aedeagus, lateral view; 182, aedeagus, dorsal view; 183, style, lateral view.

in description of genus; clypeus long, broad anteriorly, narrowed posteriorly, without median longitudinal carina, surface finely granulose, anterior margin broadly rugulose; clypellus with lateral margins nearly parallel.

Male pygofer in lateral aspect with long, narrow, curved process arising caudoventrally, process with lateral margins nearly equidistant, apical half aperturized on inner lateral margin, striate apically; aedeagus in lateral aspect simple; dorsal appendage attenuated apically, constricted subapically, curved caudodorsally apically; ventral appendage long, narrow, tube-like reaching apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed, apically; plate with terminal segment elongate, lateral margin slightly swollen subapically.

SPECIMENS EXAMINED.

Holotype ♂, NEW CALEDONIA: Bourail, iii.1959 (*N. L. H. Krauss*) (BPBM, Honolulu).

Paratypes. NEW CALEDONIA: Concepcion, 1 ♂, 5.xi.1944 (*Wilfred Crabb*) (USNM, Washington); 1 ♂, 18.ix.1944 (*J. G. Herron*) (NCSU, Raleigh).

BIOLOGY. Unknown.

REMARKS. *Tharra vesca* is one of the smallest species in the genus *Tharra*. It is closely related to *kraussi* in general habitus, but can be separated from that species by the absence of a flange on the dorsal appendage of the aedeagus.

Tharra labena (Kirkaldy)

(Text-figs 184-188)

Tharra labena Kirkaldy, 1906 : 325. Holotype ♀, AUSTRALIA: Queensland (BPBM, Honolulu) [examined].

Tharra labena Kirkaldy; Metcalf, 1964 : 24.

Tharra labena Kirkaldy; Evans, 1966 : 188.

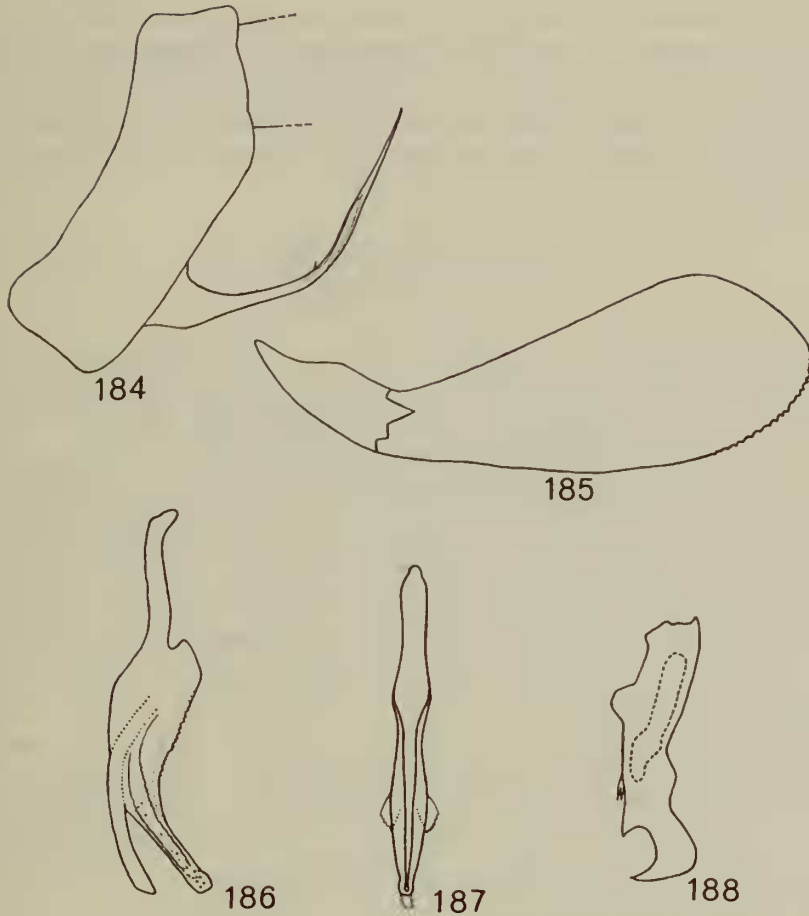
Tharra labena Kirkaldy; Evans, 1971 : 47.

Length: ♂ 5.00-5.30 mm, ♀ 6.00 mm.

General colour ochraceous, sometimes with spots along apex of costa. Crown ochraceous; eyes deep fuscous; pronotum and scutellum ochraceous; elytra ochraceous, sometimes with light fuscous markings or spots along the apex of the costa, apex sometimes suffused with light brown; clypeus rufous; clypellus ochraceous.

Head distinctly narrower than pronotum; crown produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, depressed medially, lateral margins nearly parallel, disk considerably elevated above level of eyes; ocelli medium size, situated anteriorly; eyes large, elongate, occupying nearly two-thirds entire dorsal area of head; pronotum large, median length greater than median length of crown, surface finely knobbed; scutellum large, median length equal to median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus long, anterior margin broad, narrowed posteriorly, without median longitudinal carina, surface finely knobbed, narrowly rugulose along anterior margin; clypellus with lateral margins strongly divergent.

Male pygofer in lateral aspect with long, curved, slender, sharply pointed process, broad basally; aedeagus in lateral aspect with flanges; dorsal appendage swollen at basal half, tube like at apical half with small spicules along the ventral subapical margin, dorsal margin dentate basally, flange on either side of middle, and a pair of ventral flanges basally along ventral margin; ventral appendage short, tube-like, reaching apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with distal segment elongate, slightly enlarged subapically.



FIGS 184-188. *Tharra labena* Kirkaldy. 184, male pygofer, lateral view; 185, plate, lateral view; 186, aedeagus, lateral view; 187, aedeagus, dorsal view; 188, style, lateral view.

DISTRIBUTION. Australia: Queensland (Kirkaldy, 1906).

SPECIMENS EXAMINED.

Tharra labena Kirkaldy, holotype ♀, AUSTRALIA: Queensland (*Perkins*) (BPBM, Honolulu). The holotype ♀ has nearly been destroyed. Only part of the right tegmina remains on the mounted pin. I have based my interpretation of the species on material authentically determined by and received from Dr J. W. Evans and other material received from the British Museum (Natural History) and the B. P. Bishop Museum.

AUSTRALIA: Queensland, Lake Barine, 530 m, 1 ♂, 31.i.1964 (*J. Sedlacek*); Queensland, Kuranda, 350 m, rain forest, 3 ♂, 6-8.v.1961 (*J. L. Gressitt*); Queensland, 2 ♂, 1 ♀, iv. 1904 (*F. P. Dodd*); Queensland, 2 ♂, 26.xii.1958 (*D. K. McAlpine*).

BIOLOGY. Unknown. Collection records indicate that the species is common from May to December. It apparently is restricted to Queensland, Australia.

REMARKS. This species is one of a few in *Tharra* that occurs only in Australia. It can be separated from Australian species by the presence of two pairs of flanges on the dorsal appendage of the aedeagus, and a very narrow, sharply pointed pygofer process.

Tharra kraussi sp. n.

(Text-figs 189-193)

Length: ♂ 4.10-4.70 mm, ♀ 5.30-5.50 mm.

General colour testaceous in ♂, fuscous in ♀. Crown ochraceous; eyes light fuscous to deep fuscous; pronotum fuscous to testaceous; scutellum testaceous; elytra testaceous to light fuscous, sometimes with ochraceous area distad of clavus in ♂, admixture of fuscous and testaceous in ♀, clypeus and clypellus ochraceous to light fuscous.

Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length nearly one-third entire median length, striate radially, lateral margins strongly convergent basally, disk elevated above eyes; ocelli small, situated anteriorly; eyes large, semi-bulbous, occupying nearly two-thirds entire dorsal area of head; pronotum short, median length equal to median length of crown, surface finely knobbed; scutellum moderate size, median length about equal to median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus long, without median longitudinal carina, anterior margin broad, posterior margin narrowed, surface finely granulose, broadly rugulose along anterior margin; clypellus with lateral margins slightly concave.

Male pygofer in lateral aspect with long, curved process arising from caudoventral margin, process with lateral margins nearly equidistant, sharply pointed apically; aedeagus in lateral aspect simple; dorsal appendage broad, narrowly constricted subapically, lateral flange on each side of middle; ventral appendage long, narrow, tube-like, apex basad of apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with distal segment elongate, lateral margins slightly expanded at distal half.

Female seventh sternum with posterior margin produced medially.

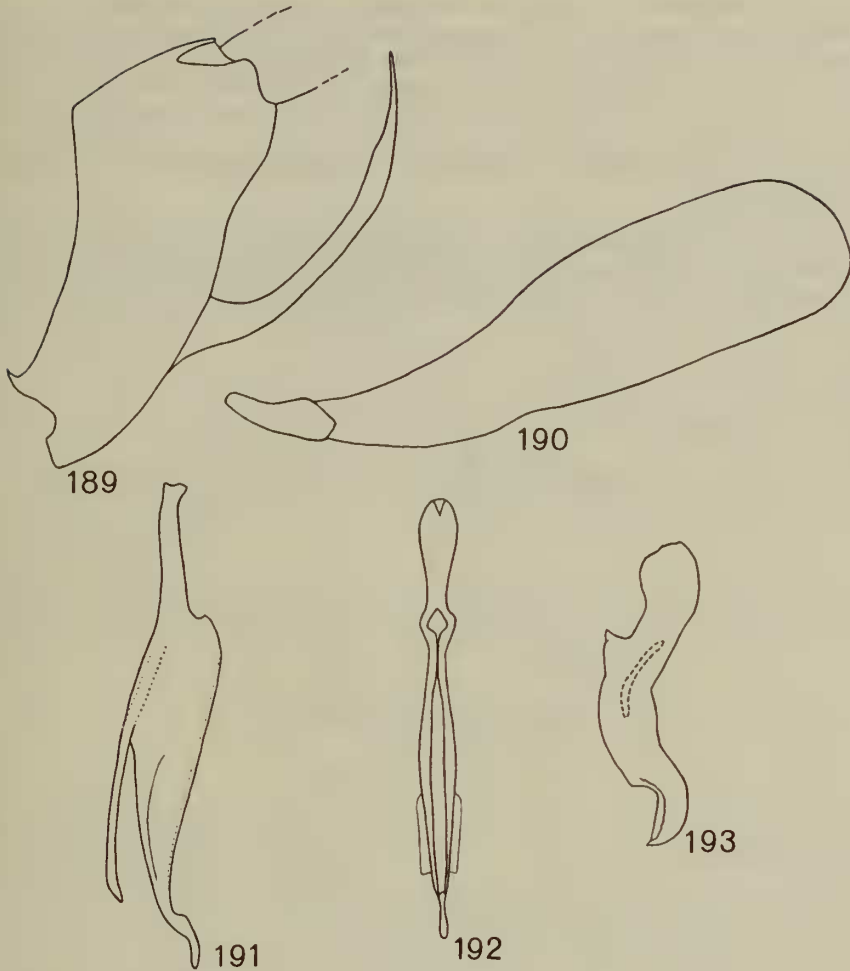
SPECIMENS EXAMINED.

Holotype ♂, NEW CALEDONIA: Riviere Bleue (Yate), 35 km S.E. of Noumea, 160-180 m, 14.xi.1963 (*R. Straatman*) (BPBM, Honolulu).

Paratypes. NEW CALEDONIA: allotype ♀, Col d'Amieu, 700-800 m, 31.iii.1968 (*J. L. Gressitt*) (BPBM, Honolulu); Riviere Bleue (Yate), 35 km S.E. of Noumea, 160-180 m, 1 ♂, 14.xi.1963 (*R. Straatman*); Mts des Koghis, 400-600 m, 1 ♂, i. 1969 (*N. L. H. Krauss*) (BPBM, Honolulu); Mt Ignambi, 900-1100 m, 1 ♂, 4.ii.1964 (*R. Straatman*) (BMNH, London); in Mts, Boulari River, 1 ♂, 3-4.xi.1958 (*C. R. Joyce*) (USNM, Washington); Riviere Bleue (Yate), 35 km S.E. of Noumea, 160-180 m, 1 ♂, 14.xi.1963 (*R. Straatman*); 10 km S. of Pouebo, 400 m, 1 ♀, 24.i.1964 (*R. Straatman*), in author's collection.

BIOLOGY. Unknown.

REMARKS. This species is similar in general habitus to *nakatai*, but can be separated from that species by the very long slender plate and the lateral flange on the dorsal appendage of the aedeagus.



FIGS 189-193. *Tharra kraussi* sp. n. 189, male pygofer, lateral view; 190, plate, lateral view; 191, aedeagus, lateral view; 192, aedeagus, dorsal view; 193, style, lateral view.

***Tharra nakatai* sp. n.**

(Text-figs 194-198)

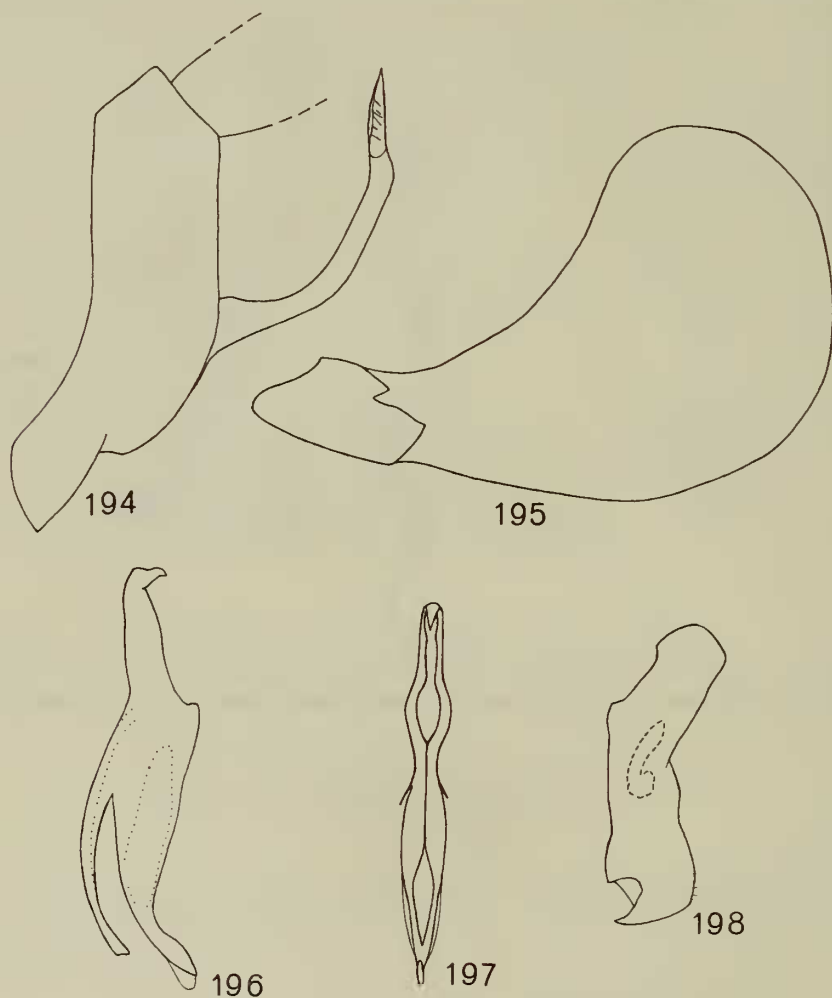
Length: ♂ 3.90-4.30 mm, ♀ 5.00-5.60 mm.

General colour fuscous with veins on elytra deeply piceous; sexual dimorphism apparent. Crown ochraceous anteriorly, piceous posteriorly in ♂, ochraceous throughout in ♀; eyes ochraceous to fuscous; pronotum piceous in ♂, generally ochraceous, but piceous along anterior margin in ♀; scutellum piceous in ♂, ochraceous in ♀; elytra deep ochraceous, two fuscous bands apically, one narrow apically, one broad subapically, veins piceous, pale ochraceous spot on clavus of ♀; clypeus and clypellus ochraceous to light rufous.

Head narrower than pronotum; crown short and broad, produced distally beyond anterior margin of eyes, distal length about one-fourth entire median length, striate radially, depressed

on each side of middle, lateral margins convergent basally, disk elevated above eyes; ocelli small, situated anteriolaterally; eyes large, somewhat bulbous, occupying only about half entire dorsal area of head; pronotum short, median length slightly less than median length of crown; scutellum moderate size, median length slightly greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus long, without median longitudinal carina, broad anteriorly, narrowed posteriorly, surface finely granulose at posterior half, rugulose at anterior half; clypellus with lateral margins concave.

Male pygofer in lateral aspect with long, curved process arising from caudoventral margin, process with lateral margins nearly equidistant throughout, slightly broader basally, aperturized apically along inner lateral margin, striate apically; aedeagus in lateral aspect simple; dorsal appendage broad at basal three-fourths, with a pair of very small spines subbasally



FIGS 194-198. *Tharva nakatai* sp. n. 194, male pygofer, lateral view; 195, plate, lateral view; 196, aedeagus, lateral view; 197, aedeagus, dorsal view; 198, style, lateral view.

in dorsal aspect, apex constricted and curved dorsally; ventral appendage long, tube-like, apex not reaching apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with distal segment semiglobulose.

Female seventh sternum with posterior margin produced medially.

SPECIMENS EXAMINED.

Holotype ♂, NEW CALEDONIA: Mt Koghi, iii.1959 (*N. L. H. Krauss*) (BPBM, Honolulu).

Paratypes. NEW CALEDONIA: allotype ♀, same data as holotype (BPBM, Honolulu); 4 ♀, same data as the holotype; We, Lifou I., 1 ♂, 16-18.ii.1963 (*C. M. Yoshimoto*); Col de la Pirogue, 330 m, 1 ♂, 14.ii.1963 (*C. M. Yoshimoto*), Mokue to Dothio, 150-500 m, 1 ♀, 20-22.iii.1968 (*T. C. Maa*) (BPBM, Honolulu); Mokoue to Dothio, 150-500 m, 1 ♂, 1 ♀, 20-22.iii.1968 (*J. L. Gressitt & T. C. Maa*) (BMNH, London); Mokoue to Dothio, 1 ♂, 1 ♀, 150-500 m, 20-22.iii.1968 (*T. C. Maa*) (USNM, Washington); 1 ♂, 1 ♀, same data as holotype, in author's collection. LOYALTY Is.: We, Lifou I., 1 ♂, 16-18.ii.1963 (*C. M. Yoshimoto*).

This species is named in honour of the late Miss Setsuko Nakata who provided me much assistance during my stay at the Bishop Museum.

BIOLOGY. Unknown.

REMARKS. *Tharra nakatai* is similar to *kraussi* in general habitus and can be distinguished from that species by the subglobular plate.

Tharra permagna sp. n.

(Text-figs 199-203)

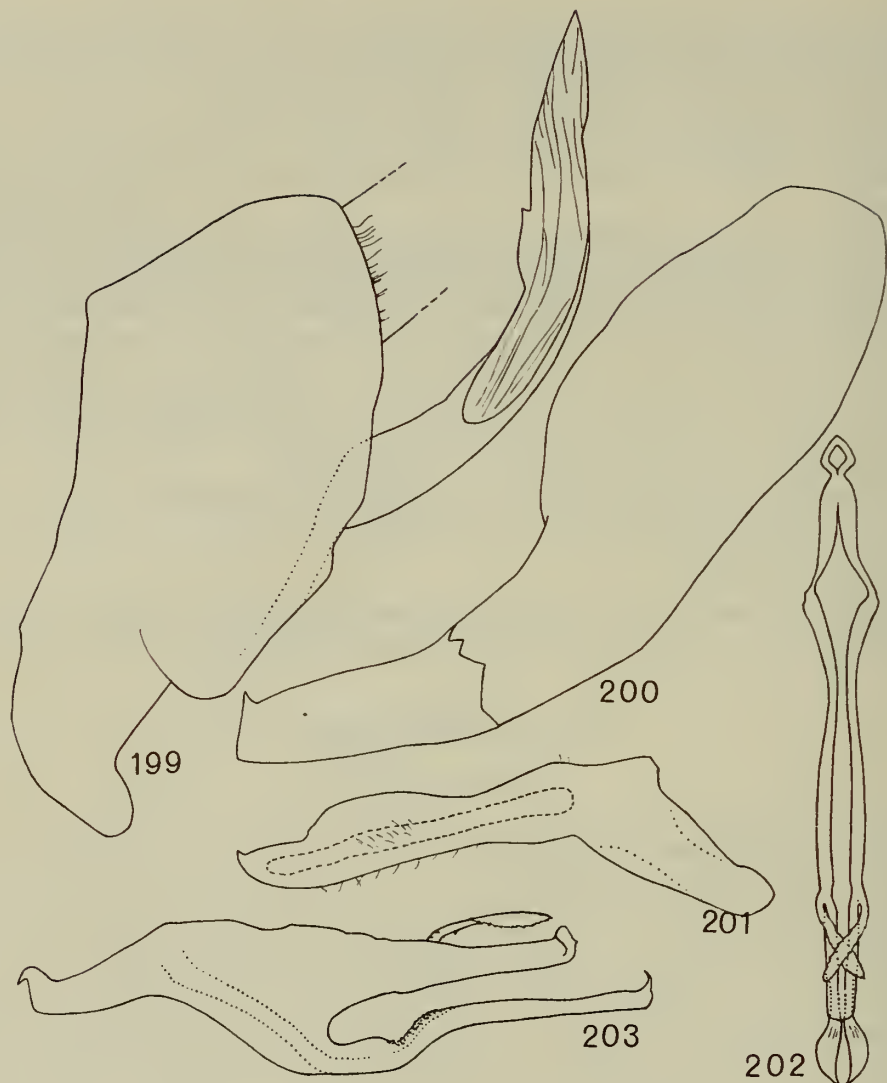
Length: ♂ 5.30 mm, ♀ 5.70-6.00 mm.

General colour light testaceous to deep fuscous with numerous ochraceous spots or markings on elytra; sexual dimorphism apparent.

Crown, pronotum, scutellum piceous in ♂, ochraceous in ♀; elytra light piceous with numerous fuscous spots and markings in ♂, fuscous with numerous markings in ♀; veins piceous in ♂, light ochraceous in ♀; clypeus and clypellus light ochraceous to light rufous.

Head slightly narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length less than one-third entire median length, striate radially, lateral margins convex, disk elevated above eyes; ocelli small, situated anteriolaterally; eyes large, somewhat globular, occupying nearly two-thirds entire dorsal area of head; pronotum very short, median length about two-thirds median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins distinct, apical cells somewhat shortened, appendix well developed, venation as in generic description; clypeus long and broad throughout, constricted near antennal sockets, with remnants of a short, obscure median longitudinal carina anteriorly, surface finely granulose, rugulose along anterior margin; clypellus with lateral margins parallel.

Male pygofer in lateral aspect with large, broad, curved process arising from caudoventral margin, process aperturized on inner lateral margin at apical two-thirds, aperturized area striate longitudinally; aedeagus in lateral aspect with a pair of serrate spines subapically on dorsal margin of dorsal appendage; dorsal appendage broad basally, narrowed at apical half; ventral appendage long, tube-like, curved abruptly basally and extending distally beyond apex of dorsal appendage, numerous fine spicules subbasally on dorsal surface, apex furcate distally in dorsal aspect; gonopore apical; connective Y-shaped; style not clawed, slightly hooked apically; plate with distal segment elongate.



FIGS 199-203. *Tharra permagna* sp. n. 199, male pygofer, lateral view; 200, plate, lateral view; 201, style, lateral view; 202, aedeagus, dorsal view; 203, aedeagus, lateral view.

Female seventh sternum deeply and narrowly emarginate on middle of posterior margin.

SPECIMENS EXAMINED.

Holotype ♂, NEW GUINEA: Wisselmeren, Okaitadi, 1800 m, 7.viii.1955 (*J. L. Gressitt*) (BPBM, Honolulu).

Paratypes. NEW GUINEA: allotype ♀, Wisselmeren, Kamo-Debai Dist., 1700 m, 13.viii.1955 (*J. L. Gressitt*) (BPBM, Honolulu); Wisselmeren, 8 km E. of Itouda, 1650 m, 1 ♀, 17.viii.1962 (*N. Wilson*); Wissel Lakes, Enarotadi, 1900-2000 m,

1 ♀, 2-11.vii.1962 (*J. L. Gressitt*) (BPBM, Honolulu); Wisselmeren, Kamo-Debai dist., 1700 m, 1 ♂, 1 ♀, 13.viii.1955 (*J. L. Gressitt*), in author's collection.

BIOLOGY. Unknown. Collection dates showed that the species is prevalent in July and August.

REMARKS. This species is similar in aedeagal characteristics to *bidentis* and can be separated from that species by the very large pygofer process and ventral appendage of the aedeagus which exceeds the apex of the dorsal appendage.

***Tharra bidentis* sp. n.**

(Text-figs 204-208)

Length: ♂ 4.40-5.00 mm, ♀ 5.00 mm.

General colour fuscous to piccous in ♂, deep ochraceous in ♀; sexual dimorphism apparent. Crown piccous in ♂, ochraceous in ♀; eyes grey to fuscous; pronotum and scutellum piccous in ♂, ochraceous in ♀; elytra piccous with large ochraceous spots throughout in ♂, ochraceous on clavus, fuscous with ochraceous spots in cells in ♀, clypeus and clypellus piccous in ♂, fuscous in ♀.

Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length slightly over one-third entire median length, striate radially, lateral margins slightly convergent basally, disk elevated above eyes; ocelli small, situated anteriolaterally; eyes large, somewhat elongate, occupying nearly two-thirds entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins slightly obscured, appendix well developed, venation as in description of genus; clypeus long, slightly broader anteriorly than posteriorly, without median longitudinal carina, constricted near antennal sockets, surface finely granulose, rugulose on anterior margin; clypellus with lateral margins slightly concave.

Male pygofer in lateral aspect with long, narrow, curved process, process with lateral margins nearly equidistant, constricted slightly subbasally, sharply attenuated apically, aperturized on inner lateral margin at apical third; aedeagus in lateral aspect with dorsal appendage broad throughout, slightly truncate apically; dorsal appendage with a pair of long, lateral, subapical spines or processes and a long membranous subventral flange medially; ventral appendage long, narrow, triangulate apically, reaching apex of dorsal appendage; gonopore apical; connective Y-shaped; plate with distal segment elongate, curved dorsally.

Female seventh sternum with posterior margin acutely angled.

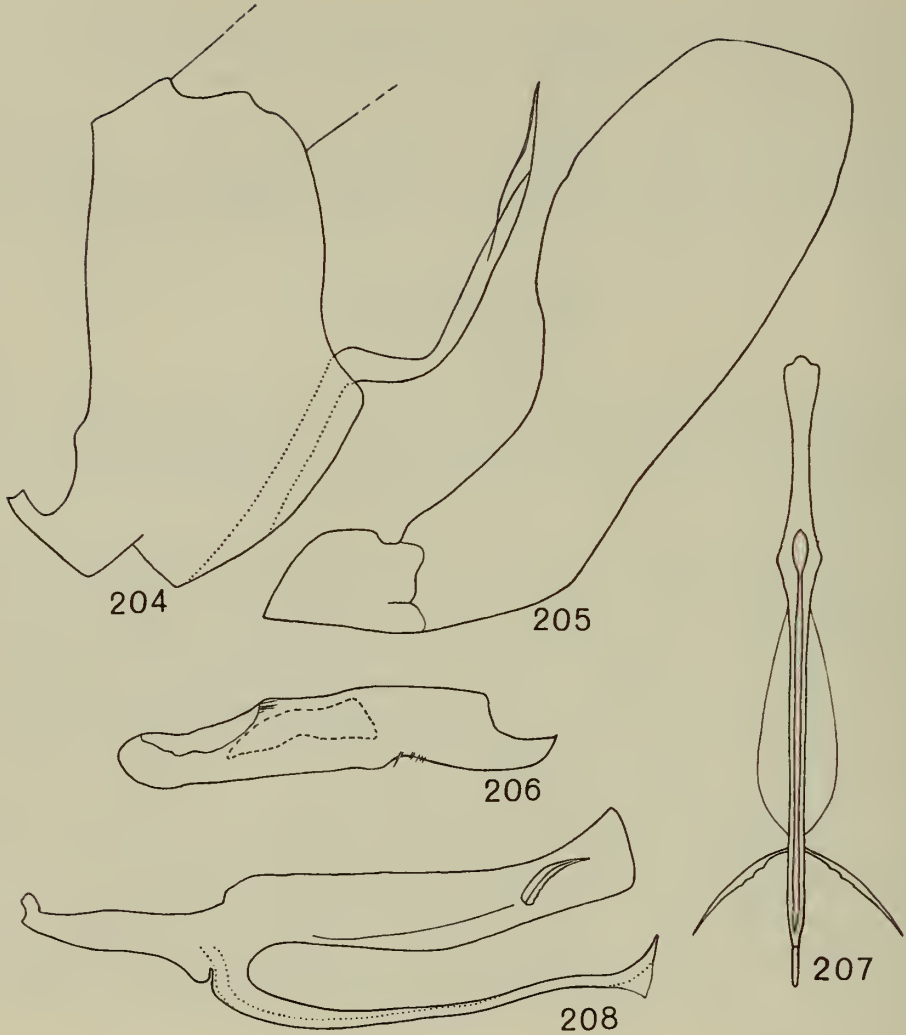
SPECIMENS EXAMINED.

Holotype ♂, NEW GUINEA: Wisselmeren, 1700 m, Waghete, Tigi L., 17.viii.1955 (*J. L. Gressitt*) (BPBM, Honolulu).

Paratypes. NEW GUINEA: allotype ♀, Wisselmeren, Enarotadi, 1900 m, 1.viii.1955 (*J. L. Gressitt*) (BPBM, Honolulu); Wisselmeren, Enarotadi, 1900 m, 1.viii.1955 (*J. L. Gressitt*) (BMNH, London); Wisselmeren, Itouda, Kamo V., 1 ♂, 14.viii.1955 (*J. L. Gressitt*), in author's collection.

BIOLOGY. Unknown. This species is prevalent in August.

REMARKS. From *permagna*, to which it is similar in male genital characteristics, *bidentis* can be distinguished by the long, narrow pygofer process and the dorsal appendage of the aedeagus with the long, membranous medial flange and the spines arising subbasally from the lateral margin.



FIGS 204-208. *Tharra bidentis* sp. n. 204, male pygofer, lateral view; 205, plate, lateral view; 206, style, lateral view; 207, aedeagus, dorsal view; 208, aedeagus, lateral view.

***Tharra perbrevis* sp. n.**

(Text-figs 209-213)

Length: ♂ 4.78 mm, ♀ 5.15 mm.

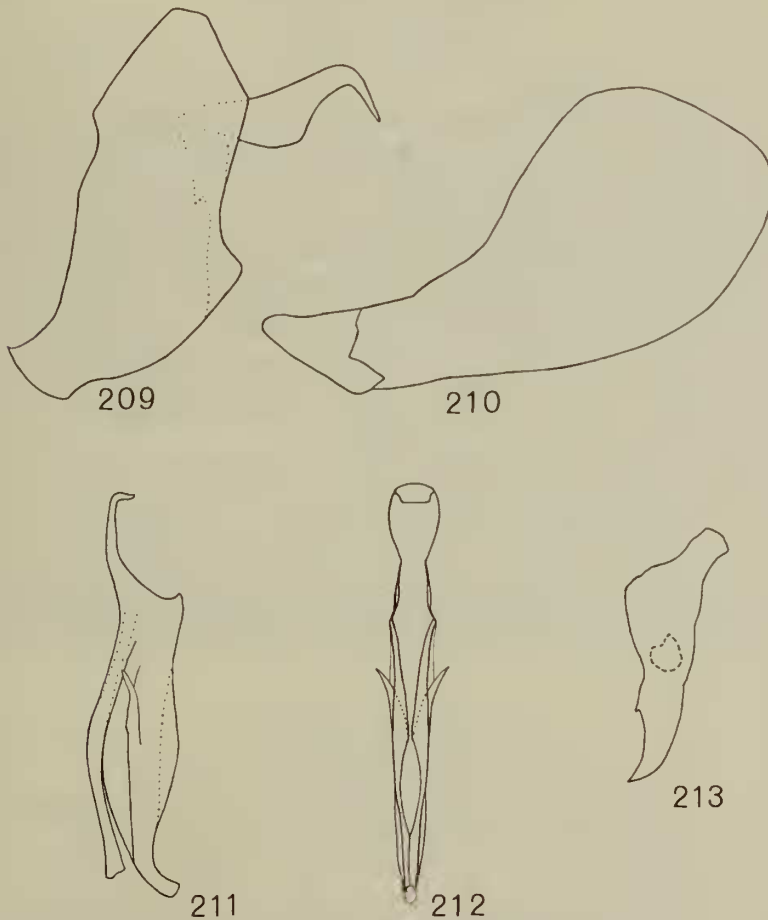
General colour light fuscous. Crown ochraceous with fuscous area on disk; eyes ochraceous; pronotum and scutellum ochraceous; elytra fuscous with small ochraceous to ivory spots or markings, veins ochraceous; clypeus and clypellus ochraceous to rufous.

Head narrower than pronotum; crown long and narrow, produced considerably beyond anterior margin of eyes, distal length over one-third but less than half entire median length, striate radially, lateral margins slightly convergent basally, disk elevated above eyes; ocelli

small, situated anteriolaterally; eyes moderate size, somewhat depressed laterally, occupying a little over half of entire dorsal area of head; pronotum short, median length slightly over half median length of crown; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in generic description; clypeus long, broad anteriorly, narrowed posteriorly, without median longitudinal carina, surface finely granulose, narrowly rugulose on anterior margin; clypellus with lateral margin abruptly and broadly divergent apically.

Male pygofer in lateral aspect with short hooked process, process with basal half enlarged narrowed and hooked apically; aedeagus in lateral aspect with dorsal appendage broad throughout basal five-sixths, narrowed and curved caudodorsally apically, with a pair of lateroventral spines projecting basally; ventral appendage narrow, tube-like, reaching basad of apex of dorsal appendage; gonopore apical; connective Y-shaped; style shallowly clawed apically; plate with terminal segment semiglobular.

Female seventh sternum with posterior margin produced medially.



FIGS 209-213. *Tharra perbrevis* sp. n. 209, male pygofer, lateral view; 210, plate, lateral view; 211, aedeagus, lateral view; 212, aedeagus, dorsal view; 213, style, lateral view.

SPECIMENS EXAMINED.

Holotype ♂, NEW GUINEA: Bodem, 11 km S.E. of Oerberfaren, 100 m, 7-17.vii.1959 (*T. C. Maa*) (BPBM, Honolulu).

Paratypes. NEW GUINEA: allotype ♀, Mt Plora, 6° 45' S. 146° E., 1900 m, 12.vi.1966 (*J. L. Gressitt*) (BPBM, Honolulu). MOLUCCAS: Ambon, 1 ♀ (*F. Muir*) (BPBM, Honolulu).

BIOLOGY. Unknown. Collection dates are June and July.

REMARKS. This species has a unique pygofer process which is short and hooked apically, and which separates it from other species of *Tharra*.

***Tharra forissa* sp. n.**

(Text-figs 214-218)

Length: ♂ 7.30 mm, ♀ unknown.

General colour ochraceous with several very small spots scattered on elytra. Crown ochraceous; eyes fuscous; pronotum and scutellum ochraceous; elytra ochraceous with numerous ivory spots in cells; clypeus ochraceous with an ivory transverse band anteriorly.

Head considerably narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, slightly depressed medially, lateral margins nearly parallel, disk elevated above eyes; ocelli large, situated anteriolaterally; eyes moderate size, occupying a little over half of entire dorsal area of head; pronotum large, median length greater than median length of crown; scutellum large, median length about equal to median length of pronotum; elytra long and narrow, veins prominent, appendix very well developed, venation as in description of genus; clypeus long, broad anteriorly, narrowed posteriorly, without median longitudinal carina, surface finely granulose, rugulose along anterior margin; clypellus with lateral margins constricted medially.

Male pygofer in lateral aspect with long, narrow process arising caudoventrally, process nearly equidistant throughout, sharply pointed apically, with large, lateral subapical flange on inner lateral margin; aedeagus in lateral aspect with dorsal appendage broad at basal half, narrowed slightly at apical half; dorsal appendage with a pair of long spines arising medially on subdorsal margin, projecting basally, and a long, narrow, lateral flange medially; ventral appendage long, tube-like, extending beyond apex of dorsal appendage; gonopore apical; connective Y-shaped; style hooked apically; plate with terminal segment elongate, lateral margins expanded subapically.

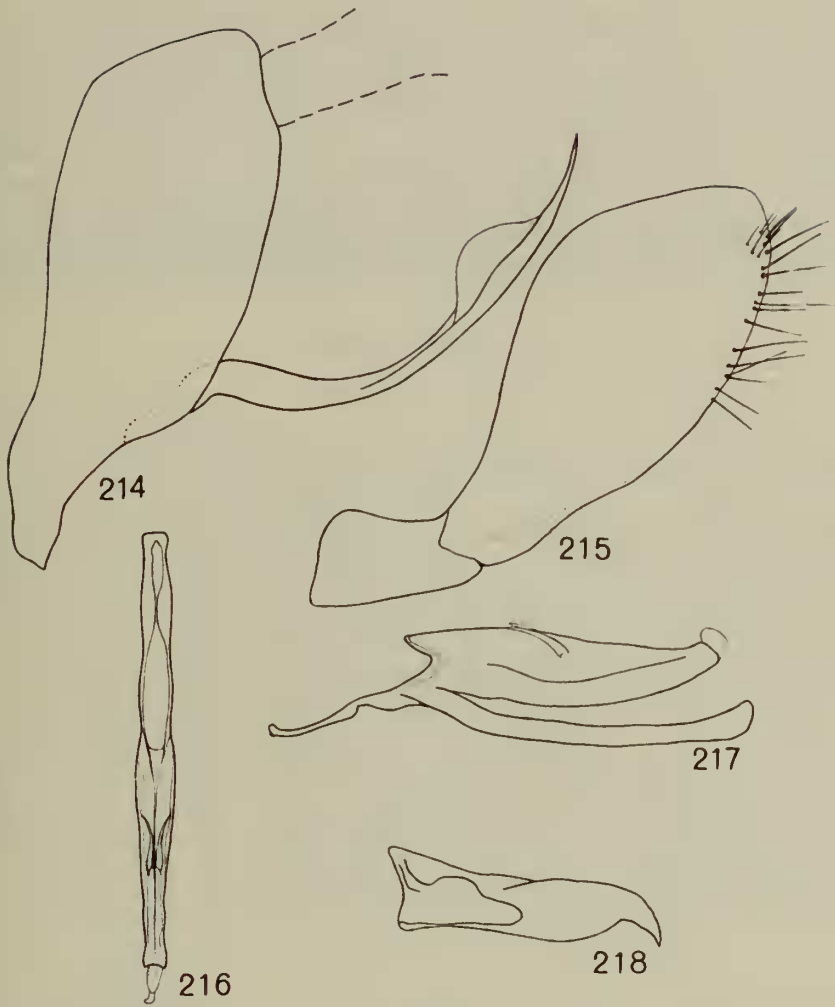
SPECIMENS EXAMINED.

Holotype ♂, NEW GUINEA: Papua, Mt Dayman, Maneau Range, 2230 m, N. slope No. 4, 17.v.1953 (*Geoffrey M. Tate*) (AMNH, New York).

Paratype. NEW GUINEA: Mt Missim, 2400 m, 1 ♂, 22-30.iv.1968 (*J. L. Gressitt*, *R. C. A. Rice* & *J. Sedlacek*), in author's collection.

BIOLOGY. Unknown.

REMARKS. This species is similar in general habitus to *villosa* but can be separated from that species by the presence of a large, subapical, lateral flange on the pygofer process.



FIGS 214-218. *Tharra forissa* sp. n. 214, male pygofer, lateral view; 215, plate, lateral view; 216, aedeagus, dorsal view; 217, aedeagus, lateral view; 218, style, lateral view.

***Tharra serrata* sp. n.**

(Text-figs 219-223)

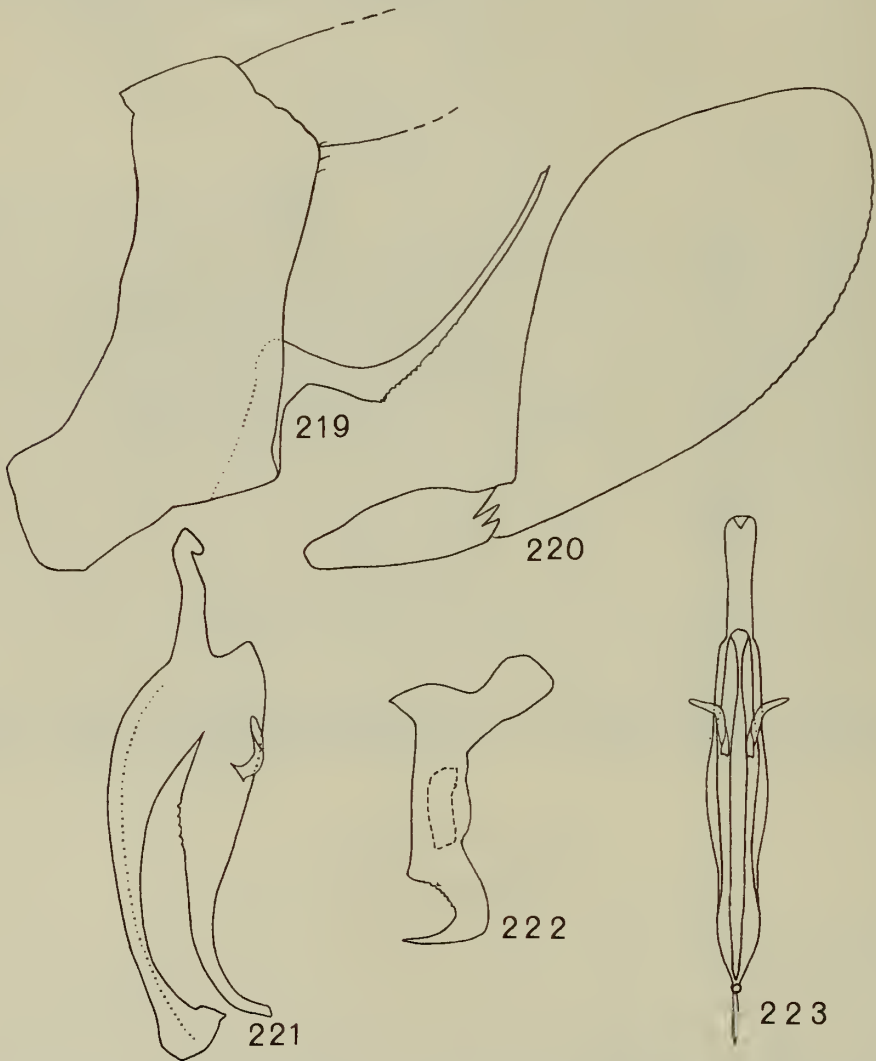
Length: ♂ 6.00 mm, ♀ unknown.

General colour fuscous. Crown fuscous; eyes deep fuscous; pronotum and scutellum fuscous; elytra fuscous with several hyaline spots in cells; clypeus and clypellus fuscous.

Head narrower than pronotum; crown long, produced distally beyond anterior margin of eyes, distal length over one-third entire median length, striate radially, slightly depressed medially on either side of middle between eyes, lateral margins slightly convergent basally, disk elevated above eyes; ocelli small, situated anteriorly; eyes moderate size, occupying a little over half of entire dorsal area of head; pronotum large, median length greater than median

length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus long, broad anteriorly, narrowed posteriorly, without median longitudinal carina, surface finely granulose, rugulose along anterior margin; clypellus with lateral margins constricted medially.

Male pygofer in lateral aspect with long, slender process, process somewhat sickle-shaped, broad basally, narrowed and curved at apical three-fourths, outer lateral margin serrate, sharply pointed apically; aedeagus in lateral aspect with dorsal appendage broad at basal two-thirds, narrowly attenuated at apical one-third, curved dorsally apically; dorsal appendage with a pair of long, curved processes near middle on lateral margin; ventral appendage broad at basal half, narrowed at apical half, with apex broadly expanded dorsally, extending beyond apex



FIGS 219-223. *Tharra serrata* sp. n. 219, male pygofer, lateral view; 220, plate, lateral view; 221, aedeagus, lateral view; 222, style, lateral view; 223, aedeagus, dorsal view.

of dorsal appendage; gonopore terminal; connective Y-shaped; style clawed apically; plate with distal segment elongate, broadly expanded along dorsal margin.

SPECIMEN EXAMINED.

Holotype ♂, BORNEO: north, Bundu Tukan, 18.ii.1959 (*T. C. Maa*) (BPBM, Honolulu).

BIOLOGY. Unknown.

REMARKS. This species is similar to *forissa* in male genital characteristics, but can be separated from that species by the presence of a serrated pygofer process.

***Tharra asolita* sp. n.**

(Text-figs 224-228)

Length: ♂ 4.40 mm, ♀ unknown.

General colour testaceous. Crown testaceous at apical half, ochraceous at basal half; eyes testaceous; pronotum, scutellum and elytra testaceous; clypeus testaceous at anterior half, ochraceous at posterior half; clypellus ochraceous.

Head narrower than pronotum; crown long, produced distally beyond anterior margin of eyes, distal length over one-third entire median length, striate radially, lateral margins nearly parallel, disk elevated above eyes; ocelli small, situated anteriorly; eyes large, occupying nearly two-thirds of entire dorsal area of head; pronotum short, median length about equal to median length of crown; scutellum moderate size, median length about equal to median length of pronotum; elytra elongate, veins somewhat obscured, appendix well developed, venation as in description of genus; clypeus long, broad anteriorly, narrowed posteriorly, without median longitudinal carina, surface finely granulose, rugulose along interior margin; clypellus with lateral margins slightly concave.

Male pygofer in lateral aspect with long, curved process, process bulbous subapically, sharply pointed apically, with many minute longitudinal striations on subapical half; aedeagus in lateral aspect with dorsal appendage broad at basal two-thirds, gradually tapered subapically, curved dorsad apically; dorsal appendage with a pair of very short, subbasal, sharp spines on dorsal margin, spines projecting basad; ventral appendage long, tube-like, reaching apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with distal segment elongate, slightly bulbous medially on dorsal margin.

SPECIMEN EXAMINED.

Holotype ♂, NEW GUINEA: Papua, Kunga, Fly R. 9.ix.1957 (*W. W. Brandt*) (BPBM, Honolulu).

BIOLOGY. Unknown.

REMARKS. This species is similar to *nakatai* in general habitus and male genital characteristics, but can be separated from that species by the large, curved pygofer process and the elongate narrow plate.

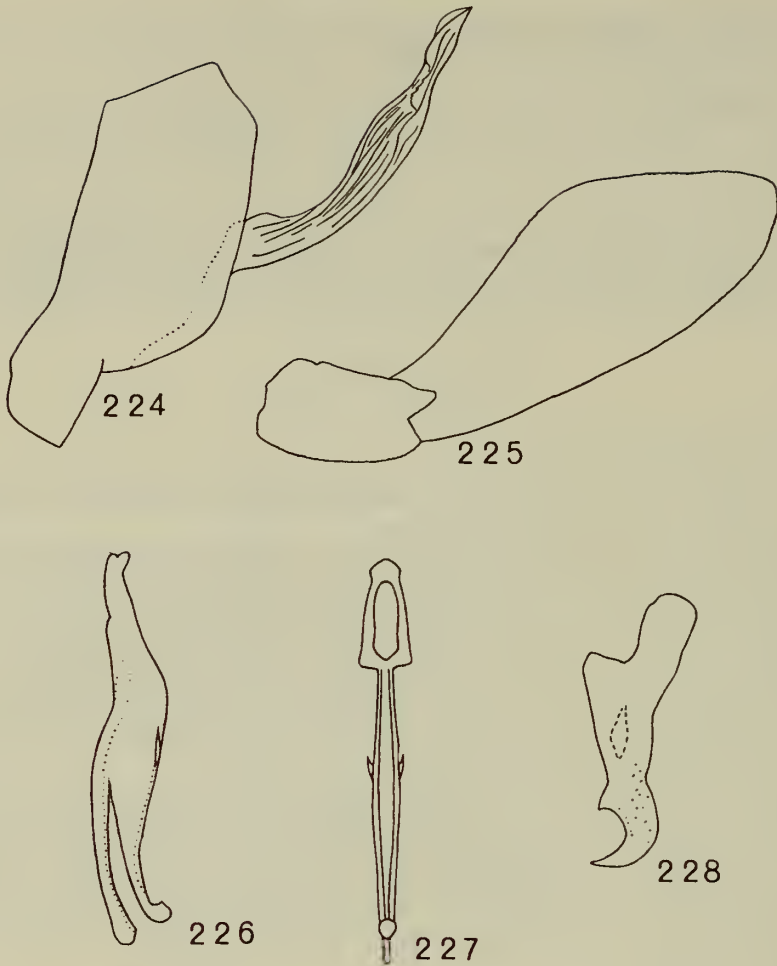
***Tharra leai* Evans**

(Text-figs 229-233)

Tharra leai Evans, 1941 : 41. Holotype ♀, AUSTRALIA: North Queensland, Cairns (SAM, Sydney).

Tharra leai Evans; Metcalf, 1964 : 24.

Tharra leai Evans; Evans, 1966 : 189.



FIGS 224-228. *Tharra asolita* sp. n. 224, male pygofer, lateral view; 225, plate, lateral view; 226, aedeagus, lateral view; 227, aedeagus, dorsal view; 228, style, lateral view.

Length: ♂ 5.10-5.70 mm, ♀ 5.90-6.40 mm.

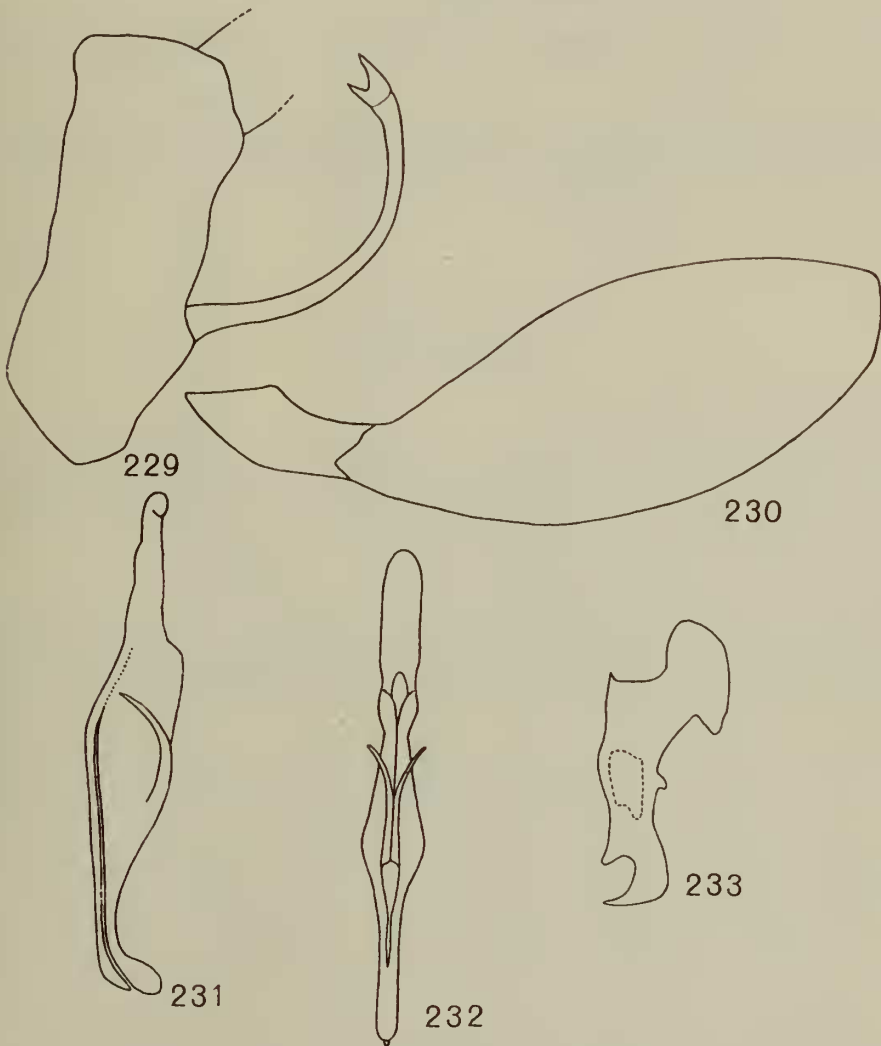
General colour ochraceous to fuscous. Crown ochraceous; eyes fuscous; pronotum and scutellum ochraceous; elytra ochraceous on basal half, fuscous on apical half; clypeus and clypellus ochraceous.

Head narrower than pronotum; crown long and broad, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, lateral margins nearly parallel, disk elevated considerably above level of eyes; ocelli small, situated anteriolaterally; eyes moderate size, somewhat globular, occupying a little over half entire dorsal area of head; pronotum short, median length about equal to median length of crown, surface finely knobbed; scutellum large, median length exceeding median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus long, broad anteriorly, narrowed posteriorly without median longitudinal carina, surface finely granulose, rugulose along anterior margin; clypellus with lateral margins slightly divergent apically.

Male pygofer in lateral aspect with long, narrow, curved process, process with lateral margins nearly equidistant, segmented subapically, aperturized apically, apex deeply bifid; aedeagus in lateral aspect with dorsal appendage broad at basal three-fourths, constricted subapically, slightly bulbous apically and curved dorsad; dorsal appendage with a pair of long, curved dorsal spines situated medially, projecting anteroventrad; ventral appendage long, narrow, tube-like, apex not quite reaching apex of dorsal appendage; gonopore apical, connective Y-shaped; style clawed apically; plate with terminal segment elongate, lateral margins broad medially.

Female seventh sternum with posterior margin produced medially.

DISTRIBUTION. Australia.



FIGS 229-233. *Tharra lei* Evans. 229, male pygofer, lateral view; 230, plate, lateral view; 231, aedeagus, lateral view; 232, aedeagus, dorsal view; 233, style, lateral view.

SPECIMENS EXAMINED.

AUSTRALIA: Queensland, Black Mountain Rd, near Kuranda, 300 m, 1 ♀, 7.v.1961 (*L. & M. Gressitt*); Q., Coolangata, 1 ♂, viii. 1910 (*F. Muir*) (BPBM, Honolulu); Q., Conandale, 3 ♂, 1 ♀, 1.vii.1930 (*H. Hacker*), in author's collection; Q., Mt Gipps, 2 ♀, 20.iv.1930 (*H. Hacker*); Q., Maleny, 4 ♀, 20.i.1935 (*H. Hacker*) (USNM, Washington); Q., Iluka Rain Forest, Clarence R. National Monument, 2 ♂, 22.ii.1963 (*McAlpine & Lossin*) (SAM, Sidney); 1907 (*F. P. Dodd*) (BMNH, London).

The holotype specimen was not examined, but I have based my interpretation of this species on authentically determined material received from Dr J. W. Evans, who made comparisons of the specimens with the holotype. The holotype female is in the South Australian Museum, Sydney.

BIOLOGY. Unknown. Collection records indicate that this species is prevalent from January to August.

REMARKS. Among the very few species of *Tharra* that occur in Australia, *leai* can be separated from those by the presence of a pair of long, curved spines on the dorsal margin of the dorsal appendage of the aedeagus.

Tharra costata sp. n.

(Text-figs 234-238)

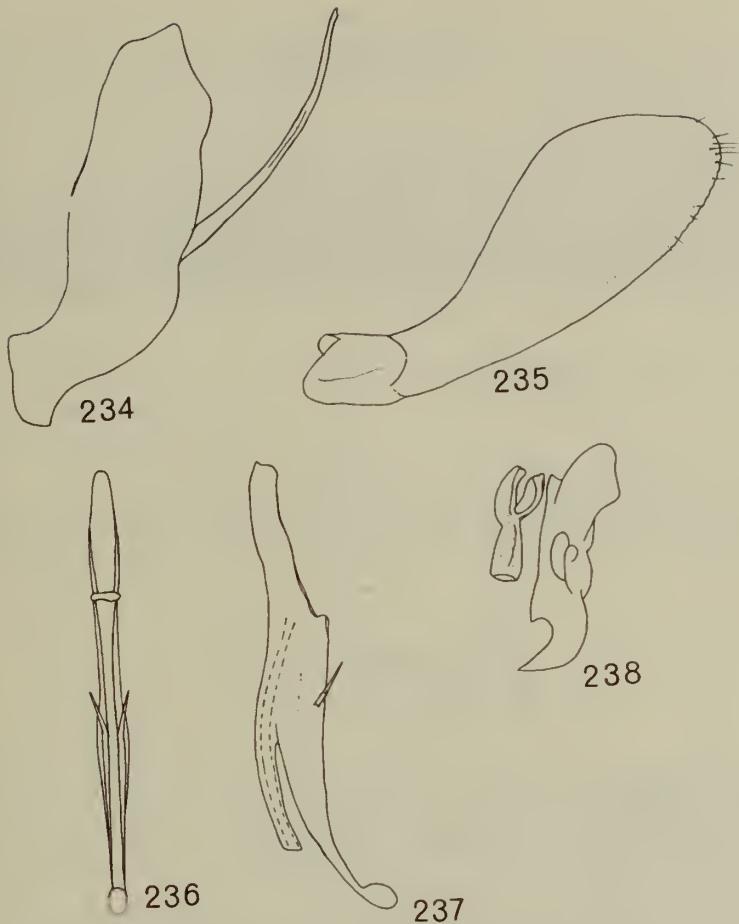
Length: ♂ 5.10 mm, ♀ 5.90-6.00 mm.

General colour testaceous with ochraceous stripes on elytra; sexual dimorphism apparent. Crown testaceous, suffused with fuscous; eyes rufo-fuscous; pronotum testaceous at basal half; ochraceous at apical half; scutellum deep ochraceous; elytra testaceous with a small ochraceous spot on clavus in ♂, broad ochraceous stripe from apex of scutellum to apex of wing in ♀; ochraceous band along middle of costal area; clypeus ochraceous, fuscous or testaceous along anterior margin; clypellus ochraceous.

Head narrower than pronotum; crown short and broad, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, slightly depressed medially, somewhat declivous anteriorly, lateral margins converging basally, disk elevated considerably above level of eyes; ocelli small, situated anteriorly; eyes moderate size, somewhat globular, occupying a little over half of entire dorsal area of head; pronotum moderate size, median length about equal to median length of crown, dorsal surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, lateral margins excised near antennal sockets, without median longitudinal carina, surface finely granulate, narrowly rugulose along anterior margin; clypellus with lateral margins constricted medially, expanded apically.

Male pygofer in lateral aspect with long, narrow, slightly curved process arising from caudoventral margin, process very narrow throughout, slightly broader basally, sharply attenuated apically; aedeagus in lateral aspect with dorsal appendage broad basally, becoming narrowly attenuated subapically, constricted subapically, expanded apically and slightly curved caudodorsally; dorsal appendage with a pair of subbasal spines on dorsal margin, ventral margin with a few very short tooth-like projections basally; ventral appendage long, tube-like, broken off about middle in type-specimen; connective Y-shaped; style broadly hooked apically; plate with distal segment elongate, dorsal margin expanded medially.

Female seventh sternum with posterior margin produced medially.



FIGS 234-238. *Tharra costata* sp. n. 234, male pygofer, lateral view; 235, plate, lateral view; 236, aedeagus, dorsal view; 237, aedeagus, lateral view; 238, style and connective, dorsal view.

SPECIMENS EXAMINED.

Holotype ♂, PHILIPPINES: Mindanao, Zamboanga del Sur, Lemesahan, 600 m, 7.ix.1958 (*H. E. Milliron*) (BPBM, Honolulu).

Paratypes. PHILIPPINES: allotype ♀, same data as holotype (BPBM, Honolulu).
 JAVA: Tjibodas, 1500 m, 1 ♀, 20.ix.1958 (*J. L. Gressitt*) (BPBM, Honolulu);
 Tjibodas, Mt Gede, 5000 ft, 1 ♀, 1909 (*Bryan & Palmer*) (USNM, Washington);
 Tjibodas, 1500 m, 1 ♀, 20.ix.1958 (*J. L. Gressitt*), in author's collection.

BIOLOGY. Unknown. Collection records indicate that this species is prevalent in November.

REMARKS. This species is similar in general habitus to *flavocostata*, but can be separated from that species by the larger size and by the presence of the subbasal spines on the dorsal appendage of the aedeagus.

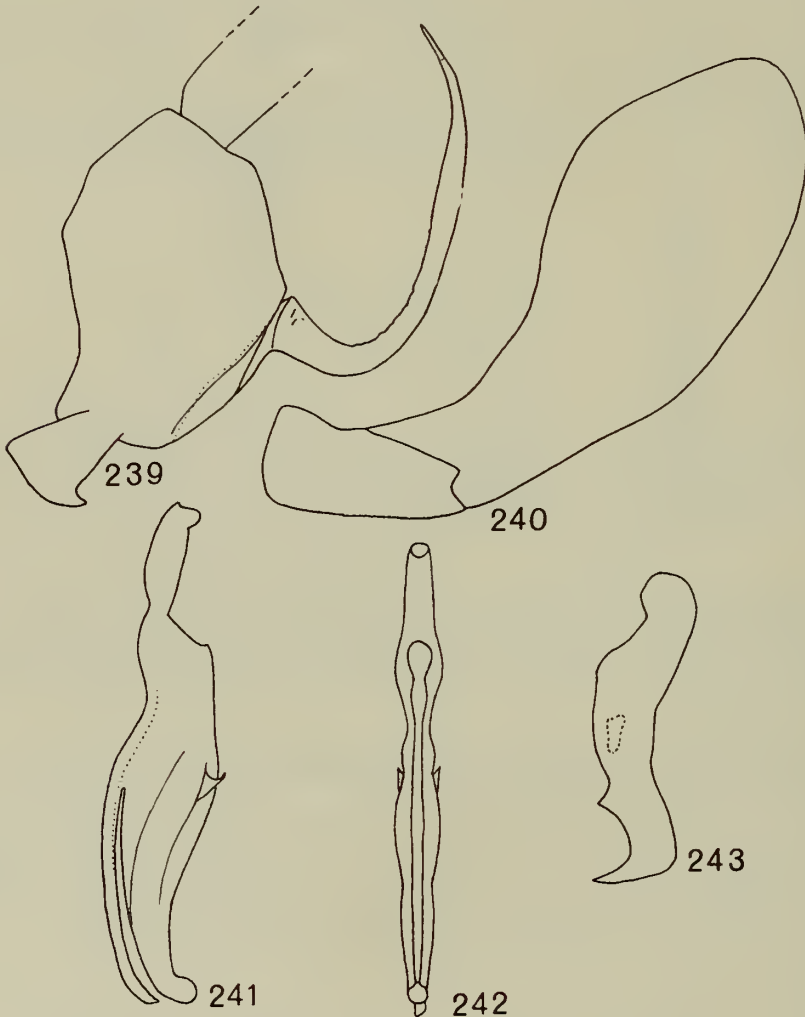
Tharra turrita sp. n.

(Text-figs 239-243)

Length: ♂ 5.10 mm, ♀ unknown.

General colour fuscous. Crown, pronotum and scutellum ochraceous; eyes testaceous; elytra deep fuscous; clypeus and clypellus light ochraceous.

Head narrower than pronotum; crown produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, lateral margins convergent basally, disk elevated above eyes; ocelli small, situated anteriorly; eyes moderate size, occupying nearly two-thirds entire dorsal area of head; pronotum with median length equal to median length of crown, surface finely knobbed; scutellum large, median length exceeding



FIGS 239-243. *Tharra turrita* sp. n. 239, male pygofer, lateral view; 240, plate, lateral view; 241, aedeagus, lateral view; 242, aedeagus, dorsal view; 243, style, lateral view.

median length of pronotum; elytra elongate, veins slightly obscured, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, lateral margins excised at middle below antennal sockets, without median longitudinal carina, surface finely granulose, rugulose along anterior margin; clypellus with lateral margins expanded apically.

Male pygofer in lateral aspect with long curved process similiar to *bispiculata*; aedeagus in lateral aspect with dorsal appendage broad at basal three-fourths, narrowed at apical one-fourth; dorsal appendage with a pair of short, broad, curved spines arising subdorsally near middle of appendage; ventral appendage long, narrow, tube-like, apex reaching apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with distal segment elongate, expanded medially on dorsal margin.

SPECIMEN EXAMINED.

Holotype ♂, NEW GUINEA: Torricelli Mts, Sugoitei Village, 900 m, 24.i.-5.ii.1959 (*W. W. Brandt*) (BPBM, Honolulu).

BIOLOGY. Unknown.

REMARKS. From *bispiculata*, to which it is closely related, *turrita* can be distinguished by the short curved spine arising subdorsally from near the middle of the dorsal appendage of the aedeagus.

Tharra bispiculata sp. n.

(Text-figs 244-248)

Length: ♂ 5.30 mm, ♀ 6.40 mm.

General colour fuscous. Crown ochraceous; eyes testaceous; pronotum and scutellum ochraceous; elytra testaceous; veins deep testaceous; clypeus and clypellus ochraceous.

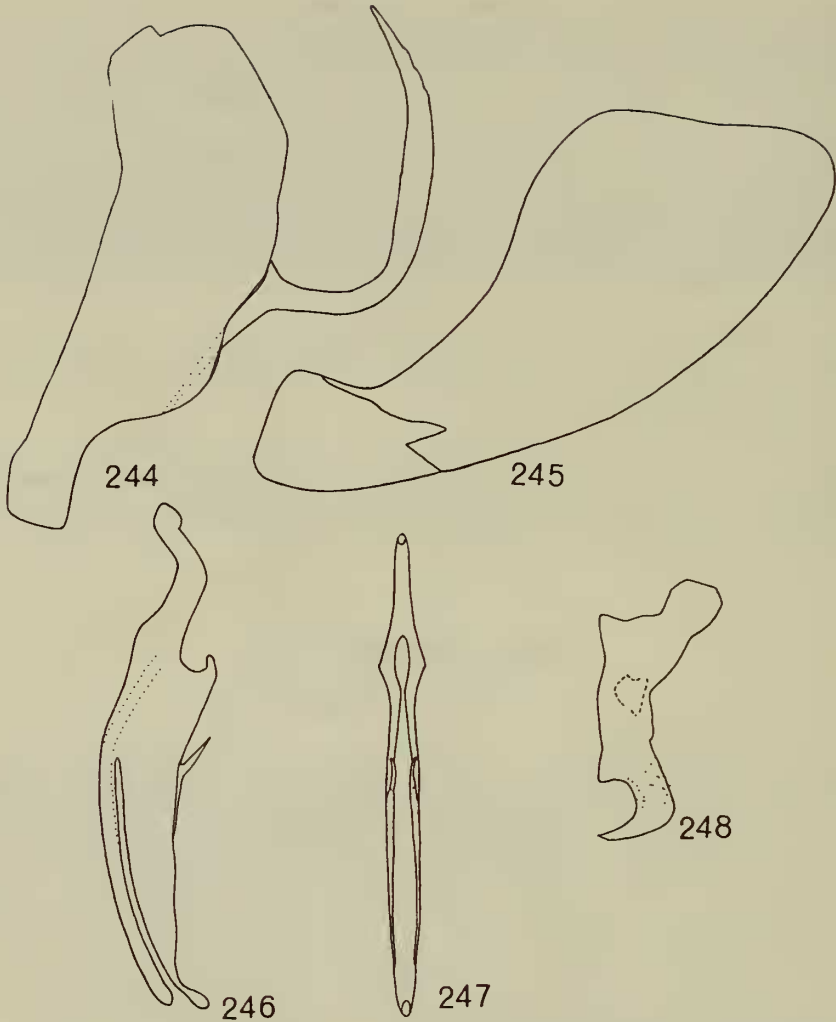
Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, lateral margins somewhat convex, disk elevated considerably above level of eyes; ocelli small, situated anteriorly; eyes large, somewhat globular, occupying nearly two-thirds of entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length exceeding median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus long, broad anteriorly, narrowed posteriorly, lateral margins constricted at antennal sockets, without median longitudinal carina, surface finely granulose, anterior margin rugulose; clypellus with lateral margins divergent apically.

Male pygofer in lateral aspect with long, curved narrow process, process lightly broader basally, with lateral margins somewhat equidistant throughout and sharply attenuated apically, aperturized medially along inner lateral margin; aedeagus in lateral aspect with dorsal appendage broad at basal three-fourths, narrowed apically, apex curved dorsad; dorsal appendage with short, broad, curved lateral spine near dorsal margin, situated medially, curved anteriorly; ventral appendage long, narrow, tube-like, reaching apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with terminal segment elongate, slightly expanded subapically.

Female seventh sternum with posterior margin produced medially.

SPECIMENS EXAMINED.

Holotype ♂, NEW GUINEA: Vogelkop, Bomberi, 700-900 m, 6.vi.1959 (*T. C. Maa*) (BPBM, Honolulu).



FIGS 244-248. *Tharra bispiculata* sp. n. 244, male pygofer, lateral view; 245, plate, lateral view; 246, aedeagus, lateral view; 247, aedeagus, dorsal view; 248, style, lateral view.

Paratypes. NEW GUINEA: allotype ♀, same data as holotype (BPBM, Honolulu); Vogelkop, Bomberi, 700-900 m, 1 ♀, 6.vi.1959 (*T. C. Maa*); Vogelkop, Fak-Fak, S. coast Bomberi 100-700 m, 2 ♀, 6.iv.1959 (*T. C. Maa*) (BPBM, Honolulu); Vogelkop, Fak-Fak, S. coast Bomberi, 10-100 m, 1 ♂, 6.iii.1959 (*T. C. Maa*) (USNM, Washington); Vogelkop, Bomberi, 700-900 m, 1 ♀, 6.v.1959 (*J. L. Gressitt*) (BMNH, London); 1 ♂, 1 ♀, same data as holotype, in author's collection.

BIOLOGY. Unknown.

REMARKS. From *turrata*, to which it is similar in male aedeagal characters,

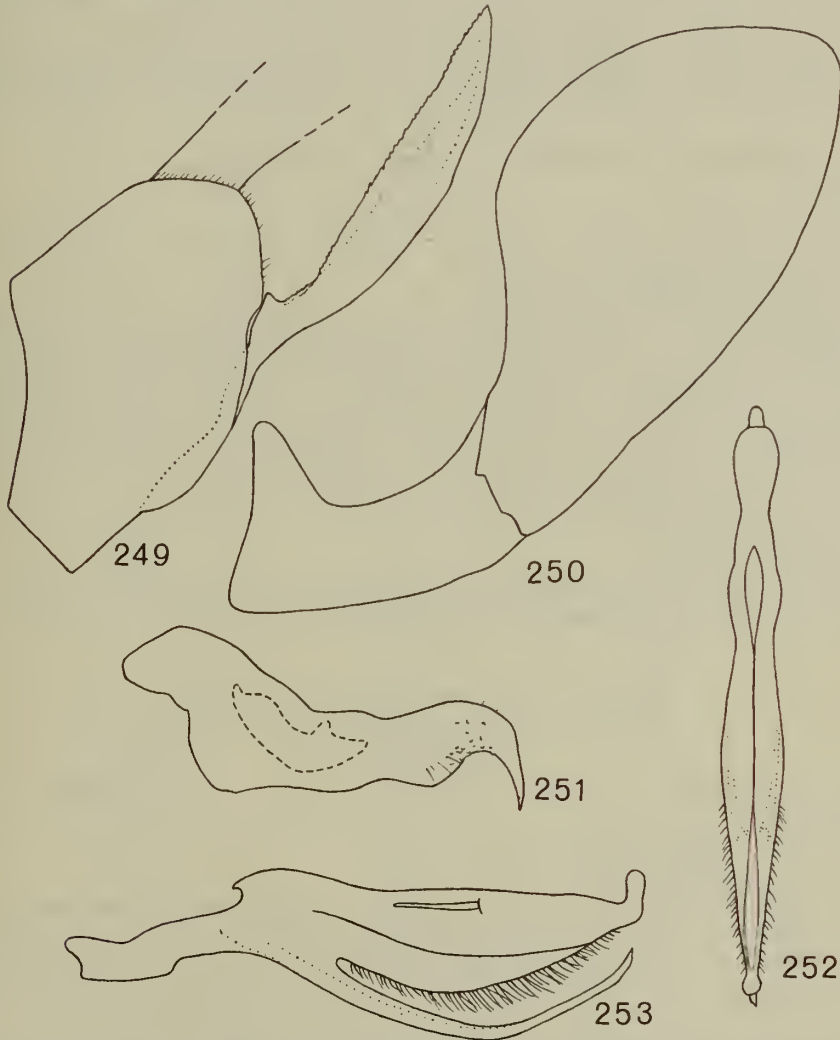
bispiculata can be separated by the presence of a short, lateral spine arising medially from the dorsal margin of the dorsal appendage, and the pygofer process, which is aperturized medially on the inner lateral margin.

***Tharra villosa* sp. n.**

(Text-figs 249–253)

Length: ♂ 6.90–7.40 mm, ♀ 7.30–8.00 mm.

General colour ochraceous to fuscous with numerous pale spots on elytra in ♂, and numerous pale to ivory spots on elytra in ♀.



FIGS 249–253. *Tharra villosa* sp. n. 249, male pygofer, lateral view; 250, plate, lateral view; 251, style, lateral view; 252, aedeagus, dorsal view; 253, aedeagus, lateral view.

Head narrower than pronotum; crown short and broad, produced distally beyond anterior margin of eyes, distal length about one-fourth entire median length, striate radially, lateral margins nearly parallel, disk elevated considerably above level of eyes; ocelli medium size, situated anteriorly; eyes large, occupying nearly two-thirds of entire dorsal area of head; pronotum long, median length greater than median length of crown, surface finely knobbed; scutellum large, median length about equal to median length of pronotum; elytra elongate and slender, veins prominent, appendix well developed, venation as in description of genus; clypeus long, broad anteriorly, narrowed posteriorly, without median longitudinal carina, surface finely granulose, rugulose along anterior margin; clypellus with lateral margins divergent apically.

Male pygofer in lateral aspect with large, broad process arising from caudoventral margin, process constricted subbasally, outer lateral margin expanded, inner lateral margin straight and serrated; aedeagus in lateral aspect with dorsal appendage broad at basal five-sixths, apex narrowed, curved, projecting dorsally; dorsal appendage with a pair of long, lateral spines situated medially, projecting anteriorly, ventral margin with numerous fine spines; ventral appendage long, tube-like, reaching apex of dorsal appendage; gonopore apical; connective Y-shaped, style hooked apically; plate with distal segment elongate, very broad medially.

Female seventh sternum with posterior margin produced medially.

SPECIMENS EXAMINED.

Holotype ♂, NEW GUINEA: Mt Plora, 6° 45' S., 146° E., 2100 m, 12.v.1966 (*C. A. Samuelson*) (BPBM, Honolulu).

Paratypes. NEW GUINEA: allotype ♀, Mt Kaindi, 240 m, 27.i.1963 (*J. Sedlacek*) (BPBM, Honolulu); 1 ♂, same data as holotype; Mt Missim, 2400 m, 3 ♂, 15.iv.1968 (*P. Coleman*); Cassim, 1350 m, 48 km E. Kainatu, 1 ♂, 30.x.1959 (*T. C. Maa*) (BPBM, Honolulu); 1 ♂, same data as holotype, 1 ♀, same data as allotype (BMNH, London); Mt Missim, 2100 m, 1 ♂, 13-15.iv.1968 (*P. Coleman*); Wisselmeren, 1500 m, Itouda, Kamo Village, 14.viii.1956 (*J. L. Gressitt*), in author's collection.

BIOLOGY. Unknown. Collection records indicate that this species is prevalent from August to January.

REMARKS. *Tharra villosa* is unique in the genus in having a row of very fine, long spines on the ventral margin of the dorsal appendage of the aedeagus.

Tharra aurulenta (Walker) **comb. n.**

(Text-figs 254-258)

Coelidia aurulenta Walker, 1870 : 316. Holotype ♀, MOLUCCAS: Morotai (BMNH, London) [examined].

Coelidia aurulenta Walker; Metcalf, 1964 : 42.

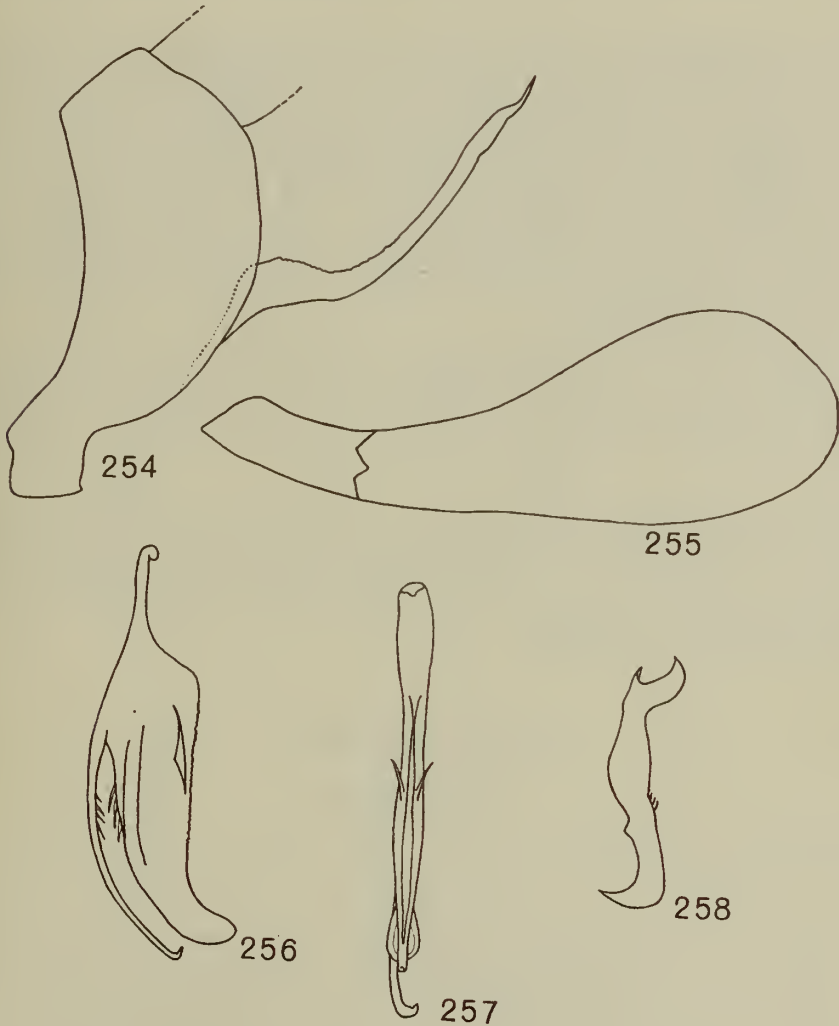
Length: ♂ 5.30-6.00 mm, ♀ 6.00-6.70 mm.

General colour fuscous. Crown ochraceous; eyes rufous; pronotum ochraceous medially, testaceous laterally; scutellum ochraceous to fuscous medially, testaceous laterally; elytra fuscous to testaceous with ivory or ochraceous area on clavus, large ochraceous areas on costa, ochraceous apically, fuscous subapically, ♂ more deeply marked than ♀; clypeus ochraceous with narrow rufous transverse band along anterior margin; clypellus ochraceous.

Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length slightly over one-third entire median length, striate radially, lateral margins slightly convergent basally, disk elevated above eyes; ocelli small, situated

anteriolaterally; eyes moderate size, occupying nearly half of entire dorsal area of head; pronotum short, median length slightly less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins somewhat obscured, appendix well developed, venation as in description of genus; clypeus long, broad anteriorly, narrowed posteriorly, without median longitudinal carina, surface finely granulose, rugulose along anterior margin; clypellus with lateral margins expanded apically.

Male pygofer in lateral aspect with long, curved process arising from caudoventral margin, process nearly equidistant throughout, sharply attenuated apically; aedeagus in lateral aspect with dorsal appendage nearly broad throughout, slightly narrowed apically, apex curved



FIGS 254-258. *Tharva aurulenta* (Walker). 254, male pygofer, lateral view; 255, plate, lateral view; 256, aedeagus, lateral view; 257, aedeagus, dorsal view; 258, style, lateral view.

dorsad; dorsal appendage with prominent subbasal, lateral flange, ventral margin with several sharp spines basally; ventral appendage very narrow, tube-like, with several sharp spines on dorsal margin subbasally, apex reaching apex of dorsal appendage; gonopore terminal; connective Y-shaped; style clawed apically; plate with distal segment elongate, somewhat bulbous apically.

Female seventh sternum with posterior margin produced medially.

DISTRIBUTION. Morotai, Solomon Islands.

SPECIMENS EXAMINED.

Coelidia aurulenta Walker, holotype ♀, MOLUCCAS: Morotai (Wallace) (BMNH, London).

SOLOMON IS.: North Georgia, Munda, 1-30 m, 1 ♂, 4 ♀, 20.vii.1959 (*J. L. Gressitt*), 5 km S. Munda, 1 ♀, 19.xi.1963 (*J. L. Gressitt*); Kolombangara, Kukundu, S.W. coast, 1-12 m, 3 ♀, 10.vii.1959 (*J. L. Gressitt*); Bougainville, Boku, 1 ♀, 4-6.vi.1958 (*J. L. Gressitt*); Borioko, 300 m, 1 ♀, 6.vi.1956 (*J. L. Gressitt*); N.W. Malaita, Dala, 2 ♂, 7.vi.1964 (*R. Straatman*); Santa Ysabel, S.E. Tatamba, 0-50 m, 2 ♂, 31.viii.1964 (*R. Straatman*); Gagan, 40 m, 1 ♂, 8-11.xii.1959 (*T. C. Maa*); San Cristobal, Wairahu R., 100-400 m, 1 ♂, 9-15.v.1964 (*J. Sedlacek*); Buka Agriculture Station, 1 ♂, 6-10.xii.1959 (*T. C. Maa*); Choiseul I., Kolombangara R., 60 m, 1 ♂, 23.vi.1964; Vella Lavella I., Ulo Crater, 10 m, 1 ♂, 7.xii.1963 (*P. Shanahan*); Gingolo, 1 ♂, 17.xi.1963 (*J. L. Gressitt*); Malaita, Auki, 2-20 m, 1 ♀, 2.x.1957 (*J. L. Gressitt*); Guadalcanal I., Munda, 15-30 m, 1 ♀, 14-15.vii.1959 (*J. L. Gressitt*); Russell I., Yandina-Banika I., 100 m, 1 ♂, 1 ♀, 26.vii.1964 (*R. Straatman*).

The holotype female of *Coelidia aurulenta* Walker is in poor condition. The head, pronotum and scutellum are missing. The elytra, which are prominently marked, were sufficiently diagnostic to allow comparison of the type with my own material.

BIOLOGY. Unknown. Collection records indicate that the species is found in mangrove swamps in the Solomon Islands. It is prevalent from June to December.

REMARKS. This species is similar in male genital characteristics to *coacta*, but can be separated from that species on the basis of the prominent flange on the dorsal appendage of the aedeagus.

Tharra coacta sp. n.

(Text-figs 259-263)

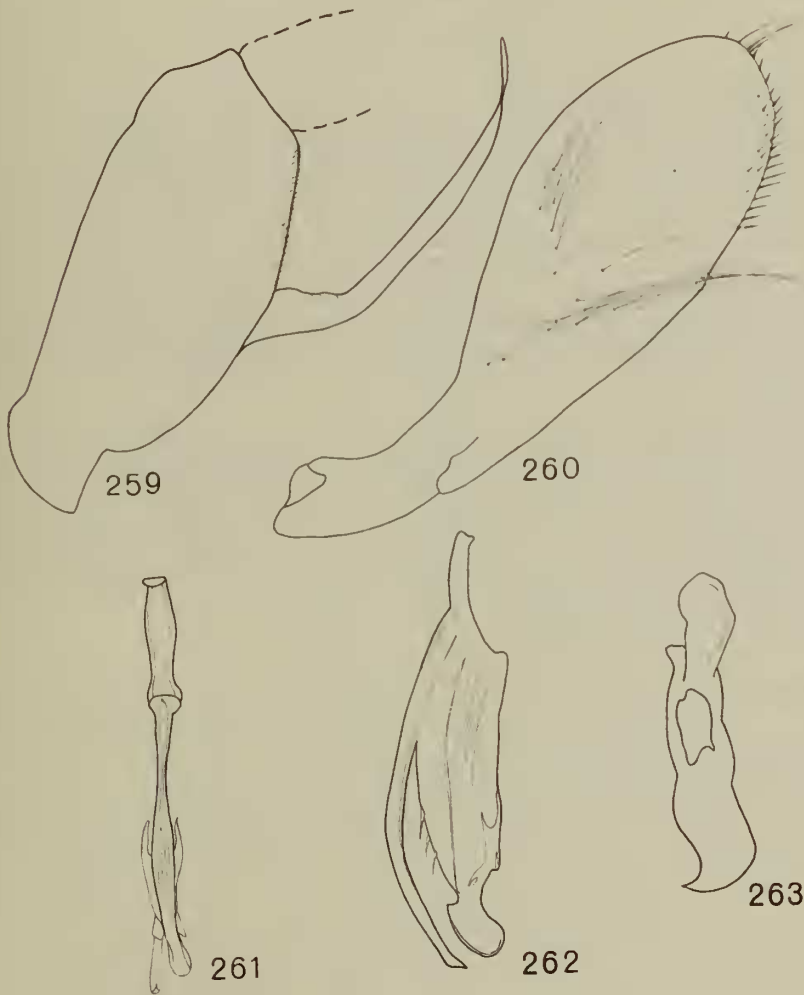
Length: ♂ 6.62 mm, ♀ unknown.

General colour ochraceous with fuscous border along apex of elytra, and two small fuscous spots basad of apex. Crown ochraceous; eyes fuscous; pronotum, scutellum and elytra ochraceous.

Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length slightly over one-third entire median length, striate radially, slightly depressed medially, lateral margins slightly convergent basally, disk elevated above eyes; ocelli medium size, situated anteriolaterally; eyes large, somewhat elongate, occupying over half of entire dorsal area of head; pronotum short, median length about equal to median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus long, broad anteriorly, narrowed posteriorly, without

median longitudinal carina, surface finely granulose, rugulose along anterior margin; clypellus with lateral margins broadly expanded apically.

Male pygofer in lateral aspect with long, slender process, process nearly equidistant throughout, prominently constricted subapically; aedeagus in lateral aspect with dorsal appendage broad at basal three-fourths, constricted subapically with somewhat globular apex; dorsal appendage with a pair of prominent dorsal spines situated subapically, and a row of sharp spines along ventral margin; ventral appendage long, tube-like, reaching apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with distal segment elongate, expanded medially along dorsal margin.



FIGS 259-263. *Tharra coacta* sp. n. 259, male pygofer, lateral view; 260, plate, lateral view; 261, aedeagus, dorsal view; 262, aedeagus, lateral view; 263, style, lateral view.

SPECIMENS EXAMINED.

Holotype ♂, NEW GUINEA: Papua, Mt Riu, Sudest I., 250-350 m, No. 10, 9.iii.1956 (*L. J. Brass*) (AMNH, New York).

BIOLOGY. Unknown.

REMARKS. This species is very similar to *aurulenta* and can be separated from that species by the presence of the pair of spines subapically on the dorsal appendage of the aedeagus.

Tharra pectoides sp. n.

(Text-figs 264-268)

Length: ♂ 4.70-5.10 mm, ♀ 5.60 mm.

General colour fuscous to testaceous; sexual dimorphism apparent. Male entirely testaceous, ♀ entirely fuscous except for clypeus and clypellus, which are ochraceous.

Head narrower than pronotum; crown narrow and short, produced distally beyond anterior margin of eyes, distal length about one-fourth entire median length, striate radially, small depression medially, lateral margins nearly parallel, disk elevated above eyes; ocelli small, situated anteriorly; eyes large, semiglobular, occupying nearly two-thirds of entire dorsal area of head; pronotum short, median length about equal to median length of crown, surface finely knobbed; scutellum large, median length slightly greater than median length of pronotum; elytra elongate, veins somewhat obscured, appendix well developed; venation as in description of genus; clypeus long, broad anteriorly, narrowed posteriorly, median longitudinal carina absent, surface finely granulose, anterior margin rugulose; clypellus with lateral margins constricted medially.

Male pygofer in lateral aspect with long, narrow, curved process arising from caudoventral margin, process broad basally, sinuate on inner lateral margin medially, constricted subapically, sharp apically; aedeagus in lateral aspect with dorsal appendage broad throughout, apex strongly curved dorsally; dorsal appendage with a pair of long, sharp spines on middle of dorsal margin, projecting basad, several long, sharp spines on ventral margin, projecting caudad; ventral appendage long, very narrow, tube-like, exceeding apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with distal segment elongate, slightly expanded medially along dorsal margin.

Female seventh sternum with posterior margin produced medially.

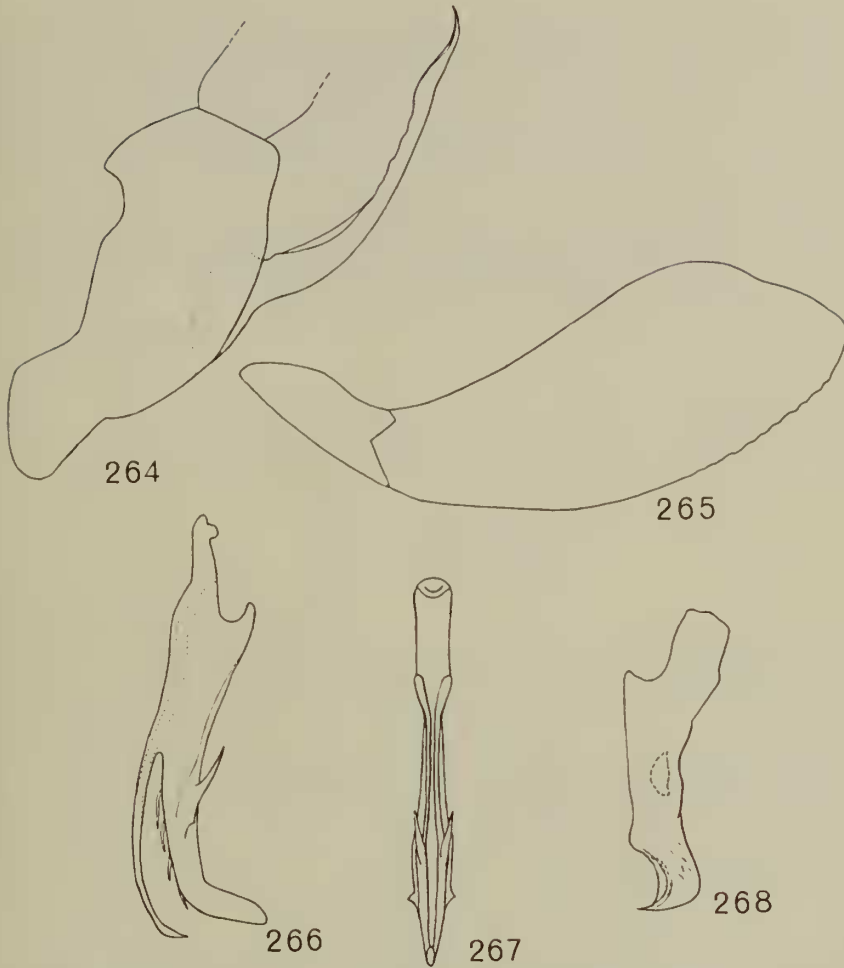
SPECIMENS EXAMINED.

Holotype ♂, NEW GUINEA: 29-32 km S. of Wau, Bulldog Rd., 2500-2700 m, 31.v.1962 (*J. Sedlacek*) (BPBM, Honolulu).

Paratypes. NEW GUINEA: allotype ♀, Bulldog Rd, about 14 km S. Edi Cr., 2450 m, 4-10.vii.1966 (*C. A. Samuelson*) (BPBM, Honolulu); 3 ♂, same data as allotype; Bulldog Rd, 2550 m, 1 ♂, 27.vii.1969 (*J. L. Gressitt*); Iongai, 10 km E. Mt Albert Edward, 1450 m, 1 ♂, 7.xi.1965 (*J. M. Sedlacek*); Mt Kaindi, 2350 m, 1 ♂, 1.iv.1964 (*J. L. Gressitt*); Lae, Sirguawa R., 147° 10' E., 6° 45' S., 30 m, 1 ♂, 4.iv.1966 (*O. R. Wilkes*); Mt Missim, 2770 m, 1 ♂, 21.xii.1967 (*J. M. Sedlacek*) (BPBM, Honolulu); 1 ♂, 1 ♀, same data as allotype (BMNH, London); 1 ♂, 1 ♀, same data as allotype, in author's collection.

BIOLOGY. Unknown.

REMARKS. This species has similar male genitalia to *aurulenta* and *coacta*, but



Figs 264-268. *Tharra pectoides* sp. n. 264, male pygofer, lateral view; 265, plate, lateral view; 266, aedeagus, lateral view; 267, aedeagus, dorsal view; 268, style, lateral view.

can be separated from these species by the long pair of spines arising medially from the dorsal appendage of the aedeagus, and the abruptly curved apex of the dorsal appendage.

***Tharra perlucida* sp. n.**

(Text-figs 269-273)

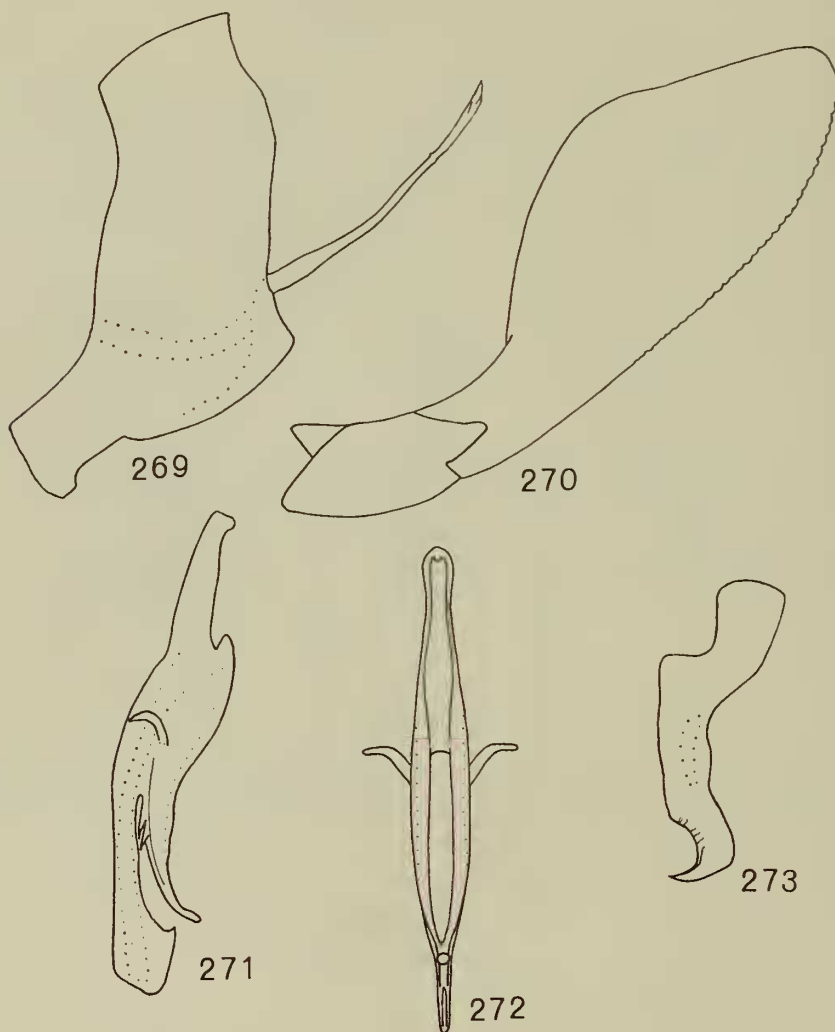
Length: ♂ 5.10-5.40 mm, ♀ 6.60 mm.

General colour testaceous. Crown fuscous; eyes testaceous; pronotum and scutellum testaceous; elytra fuscous to deep testaceous; clypeus and clypellus fuscous to testaceous.

Head narrower than pronotum; crown long and somewhat broadened, produced distally beyond anterior margin of eyes; distal length about one-third entire median length, striate

radially, slightly carinate laterally, slightly carinate medially at basal half, slightly depressed on each side of middle, lateral margins nearly parallel, disk elevated considerably above eyes; ocelli small, situated anteriolaterally; eyes moderate size, somewhat globular, occupying a little over half of entire dorsal area of head; pronotum short, median length slightly less than median length of crown, surface finely knobbed; scutellum large, median length slightly greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus long, very broad anteriorly, narrowed posteriorly, without median longitudinal carina, surface finely granulose, rugulose along anterior margin; clypellus with lateral margins broadly expanded apically.

Male pygofer in lateral aspect with long, narrow, curved process, process slightly broadened basally, narrowly attenuated apically; aedeagus in lateral aspect with dorsal appendage broad



FIGS 269-273. *Tharva perlucida* sp. n. 269, male pygofer, lateral view; 270, plate, lateral view; 271, aedeagus, lateral view; 272, aedeagus, dorsal view; 273, style, lateral view.

at basal two-thirds, narrowly attenuated at apical one-third; dorsal appendage with a pair of prominent lateral spines projecting basally, curved laterally at apical half, ventral margin with short spines subbasally, projecting caudally; ventral appendage broad basally, constricted medially, expanded apically to a triangulate or subquadrate lobe, apex exceeding apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with distal segment elongate, expanded medially along dorsal margin.

Female seventh sternum with posterior margin projecting medially.

SPECIMENS EXAMINED.

Holotype ♂, BORNEO: Sandakan (*Baker*) (USNM, Washington).

Paratypes. BORNEO: allotype ♀, Paring, near Ranau, 23.i.1958 (*T. C. Maa*) (BPBM, Honolulu); 3 ♂, same data as holotype (USNM, Washington); 1 ♂, same data as holotype (BMNH, London); 1 ♂, same data as holotype, in author's collection.

BIOLOGY. Unknown.

REMARKS. This species is similar to *pectoides* and can be distinguished by the pair of lateral spines situated medially on the dorsal appendage of the aedeagus.

Tharra lineata sp. n.

(Text-figs 274-278)

Length: ♂ 5.60 mm, ♀ 6.10-6.30 mm.

General colour deep ochraceous, suffused with fuscous. Crown deep fuscous suffused with ochraceous below; eyes rufous; pronotum and scutellum deep ochraceous; elytra deep ochraceous basally suffused with deep fuscous subapically; clypeus and clypellus suffused with fuscous and ochraceous.

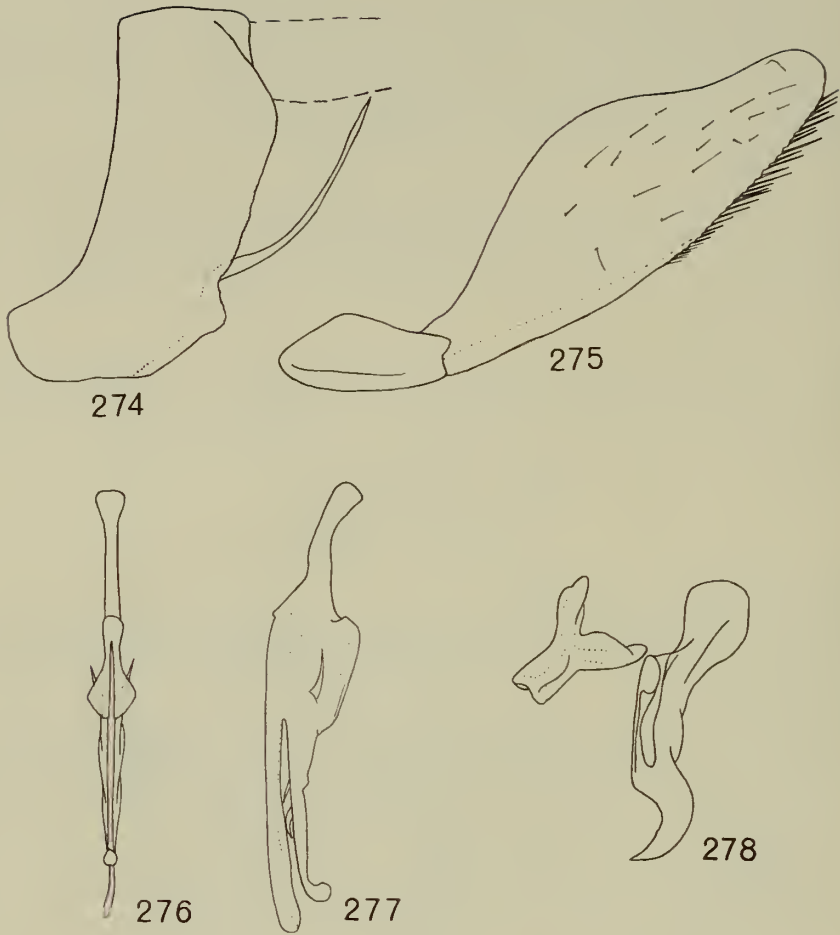
Head distinctly narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, slightly depressed medially on either side of middle, lateral margins slightly convergent basally, disk elevated considerably above level of eyes; ocelli small, situated anteriorly; eyes moderate size, somewhat elongate, occupying a little over half entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus elongate, very broad anteriorly, narrowed posteriorly, distinctly excised along middle next to antennal sockets, without median longitudinal carina, surface finely granulose, narrowly rugulose along anteriolateral margins; clypellus with lateral margins divergent apically.

Male pygofer in lateral aspect with long, very narrow, curved process, almost needle-like, process slightly broader basally, becoming very narrowly attenuated apically; aedeagus in lateral aspect with dorsal appendage broad at basal three-fourths, becoming narrowly attenuated subapically, constricted subapically, and bulbous apically, curved dorsally at apex; dorsal appendage with a pair of lateral spines situated medially and a pair of flanges on the dorsal margin subbasally, with very small, sharp dentate processes along middle of ventral margin; ventral appendage long, tube-like, apex expanded and produced distally beyond apex of dorsal appendage; gonopore apical; connective Y-shaped; style broadly curved apically, not quite clawed; plate with distal segment elongate, dorsal margin expanded medially, apex narrowed.

Female seventh sternum with posterior margin produced slightly at middle.

SPECIMENS EXAMINED.

Holotype ♂, BORNEO: north, Ranau, 22-25.ii.1959 (*T. C. Maa*) (BPBM, Honolulu).



FIGS 274-278. *Tharra lineata* sp. n. 274, male pygofer, lateral view; 275, plate, lateral view; 276, aedeagus, dorsal view; 277, aedeagus, lateral view; 278, style and connective, dorsolateral view.

Paratypes. BORNEO: allotype ♀, Liawan, 14-19.i.1959 (*T. C. Maa*) (BPBM, Honolulu); 1 ♂, same data as allotype, in author's collection.

BIOLOGY. Unknown.

REMARKS. This species is similar to other narrow-headed and long-headed species of *Tharra*, but can be separated from them by the presence of the spines on the middle of the dorsal appendage of the aedeagus and the short basal flanges on the dorsal margin, and by the elongate plate.

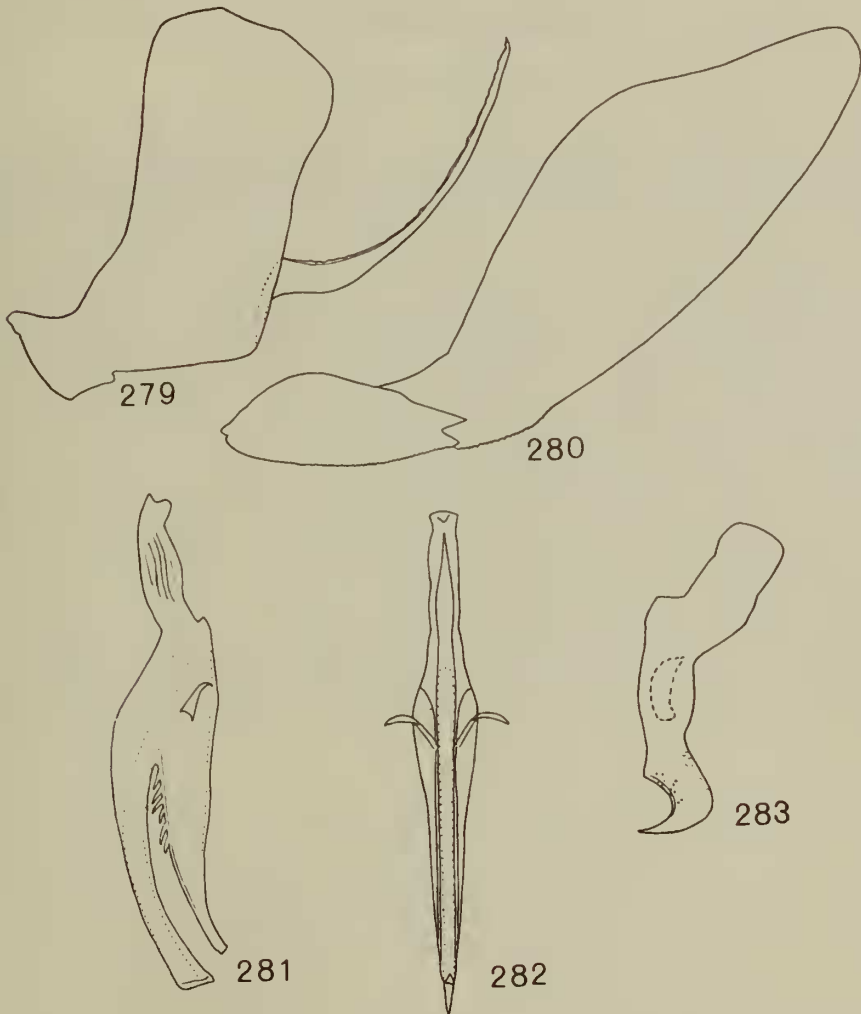
Tharra marlatti sp. n.

(Text-figs 279-283)

Length: ♂ 5.30-5.90 mm., ♀ 6.30-6.70 mm.

General colour ochraceous with a broad, lateral, uneven, fuscous band on the elytra. Crown ochraceous; eyes testaceous; pronotum and scutellum ochraceous; elytra ochraceous with a fuscous to testaceous uneven, broad lateral band; clypeus and clypellus ochraceous.

Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length slightly over one-third entire median length, striate radially, carinate medially on basal two-thirds, lateral margins slightly convergent, disk elevated above



FIGS 279-283. *Tharra marlatti* sp. n. 279, male pygofer, lateral view; 280, plate, lateral view; 281, aedeagus, lateral view; 282, aedeagus, dorsal view; 283, style, lateral view.

level of eyes; ocelli small, situated anteriorly; eyes large, occupying nearly two-thirds of entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus long, very broad anteriorly, narrowed posteriorly, without median longitudinal carina, surface finely granulose, rugulose along anterior margin; clypellus with lateral margins constricted medially.

Male pygofer in lateral aspect with long, narrow, curved process arising from caudoventral margin, process broad medially, narrow, attenuated along distal three-fourths, finely sinuate along inner lateral margin; aedeagus in lateral aspect with dorsal appendage broad at basal three-fourths, narrowly attenuated at apical one-fourth; dorsal appendage with a pair of long, curved spines basally along lateral margin and a row of sharp spines basally on ventral margin; ventral appendage long, broad, extending beyond apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with distal segment elongate, dorsal margin expanded medially.

Female seventh sternum with posterior margin produced medially.

SPECIMENS EXAMINED.

Holotype ♂, BORNEO: Sandakan (*Baker*) (USNM, Washington).

Paratypes. BORNEO: allotype ♀, same data as holotype (USNM, Washington). PHILIPPINES: 29 ♂, 44 ♀, same data as holotype; Basilan I., 12 ♂, 5 ♀ (*Baker*); Zamboanga, Mindanao, 12 ♂, 2 ♀, 1927 (*Baker*); Butuan, Mindanao, 4 ♂, 10 ♀ (*Baker*); Iligan, Mindanao, 11 ♂, 3 ♀ (*Baker*); Surigao, Mindanao, 2 ♂, 3 ♀ (*Baker*); Davao, Mindanao, 10 ♂, 2 ♀ (*Baker*); Cuernos Mts, Negros, 1 ♂, 2 ♀ (*Baker*); Kolabugan, Mindanao, 1 ♂, 1 ♀ (*Baker*); Baguio, Benquet, 1 ♂ (*Baker*); Samar I., 1 ♀ (*Baker*); Malinao, Taybas, 1 ♂ (*Baker*) (USNM, Washington); Mindanao, Agusan, S. Francisco, 10 km. S.E. 5 ♂, 13.xi.1959 (*L. W. Quate*); Bukidon, 1250 m; Mt Katanglad, 2 ♂, 1 ♀, 4-9.xii.1959 (*L. W. Quate*); Misamis, Balason, 1 ♂, 1 ♀, 4-5.iv.1960 (*W. Torre Villas*); Surigao, Mindanao, 1 ♀; Katbalogan, 1 ♂ (OSU, Columbus). BORNEO: Sarawak, Sarikei Dist., Rejang Delta, 5 ♂, 7 ♀, 15-25.vii.1958 (*T. C. Maa*); Kuching, Santubong, 797-1500 m, 1 ♂, 18-30.vi.1958 (*T. C. Maa*); Kapit Dist., Merirai V., 1 ♀, 28-31.vii.1958 (*T. C. Maa*); Bau Dist., Pangkalan, Tebang, 300-450 m, 1 ♂, 2 ♀, 6.ix.1958 (*T. C. Maa*); Gunong, Matang, 120 m, 1 ♂, 2 ♀, 13.ix.1958 (*J. L. Gressitt*); Sandakan Bay (S.W.), Sapagaya Lumber Camp, 2-20 m, 1 ♂, 2 ♀, 4.xi.1957 (*J. L. Gressitt*); Sandakan Bay (N.W.), Sepilok Forest, 1-10 m, 1 ♂, 30.x.1959 (*J. L. Gressitt*); Gomantong Caves, 3 ♀, 22-26.xi.1958 (*T. C. Maa*); Kalabakan Primary Forest, 2 ♀, 11.xi.1958 (*T. C. Maa*); West Coast Residency, Ranau, 8 miles N. Paring Hot Springs, 500 m, 1 ♂, 9-18.x.1958 (*T. C. Maa*); Liawan, 1 ♂, 14-19.i.1959 (*T. C. Maa*); Tawau Residency, Kalabakan R., Tawau, 30 miles, W., 1 ♀, 10-18.xi.1958 (*T. C. Maa*); Tawau, Quoin Hill, 1 ♀, 3-7.xii.1962 (*H. Holtmann*); Forest Camp, 19 km N. Kalabakan, 1 ♀, 1.xi.1962 (*Y. Hirashima*); Telok Ayer, 4 ♀ (*F. Muir*); Sandakan, 2 ♀, 1.1927 (*Pemberton*) (BPBM, Honolulu); Bettotan nr Sandakan, 4 ♀, 17.viii.1927; Mt Kinabalu, Mesilau Cave, 1 ♀, 23-24.iii.1964 (*S. Kueh*); Sarawak, foot of Mt Dulit, junction of Rivers Tinjar and Lejok, 2 ♀, 13.ix.1932 (*D. M. Hobby & A. W. Moore*) (BMNH, London); Sandakan, 3 ♂, 3 ♀ (*Baker*); Telok Ayer, 2 ♂, 1 ♀ (*F. Muir*), in author's collection. MALAYA: W., Selangor, Subang Forest Reserve, 90-120 m, 1 ♂, 13.iii.1958 (*T. C. Maa*) (BPBM, Honolulu); Singapore, Bukit, Timah, 100 ft, 1 ♂, 19.viii.1962 (*E. S. Ross*)

& *D. Q. Cavagnaro*); 16 miles N.E. of K. Lumpur, 1000 ft, 1 ♂, 8.vi.1962 (*E. S. Ross & D. Q. Cavagnaro*) (CAS, San Francisco). NEW CALEDONIA: Bourail, 1 ♂, iii. 1959 (*N. L. H. Krauss*) (BPBM, Honolulu).

BIOLOGY. Unknown. Collection records indicate that this species is prevalent from July to November.

REMARKS. *Tharra marlatti* is very similar to *borneoensis* on the basis of the male genital characteristics, but it can be separated from the latter species by having a narrower crown and smaller size. This species is named for my good friend and colleague, Dr Robert B. Marlatt.

Tharra borneoensis sp. n.

(Text-figs 284-288)

Length: ♂ 6.10 mm, ♀ unknown.

General colour testaceous with ochraceous markings on middle of clavus and apex of elytra. Crown fuscous; eyes testaceous; pronotum fuscous; scutellum fuscous anteriorly, ochraceous posteriorly; elytra testaceous with a narrow ochraceous band along middle of clavus and a large ochraceous spot between apex of clavus and apex of elytra; clypeus and clypellus light ochraceous.

Head narrower than pronotum; crown long and broad, produced distally beyond anterior margin of eyes; distal length about one-third entire median length, striate radially, slightly carinate laterally, lateral margins nearly parallel; disk elevated above eyes; ocelli small, situated anteriorly; eyes moderate size, occupying nearly two-thirds of entire dorsal area of head; pronotum long, median length greater than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra long and narrow, veins obscure, appendix well developed, venation as in description of genus; clypeus long, very broad anteriorly, narrowed posteriorly, without median longitudinal carina, lateral margins constricted medially, surface finely granulose, rugulose along anterior margin; clypellus with lateral margins broadly constricted medially.

Male pygofer in lateral aspect with long, narrow, curved process arising from caudoventral margin, process broad basally, very narrow and attenuated apically, sharply pointed apically; aedeagus in lateral aspect with dorsal appendage broad at basal two-thirds, attenuated at apical one-third, curved dorsad at apex; dorsal appendage with a pair of long spines situated basally on lateral margin, projecting basad, ventral margin with a row of sharp spines basally; ventral appendage long, somewhat tube-like, apex slightly expanded, reaching apex of dorsal appendage; gonopore apical; connective Y-shaped; plate with distal appendage elongate, broad apically.

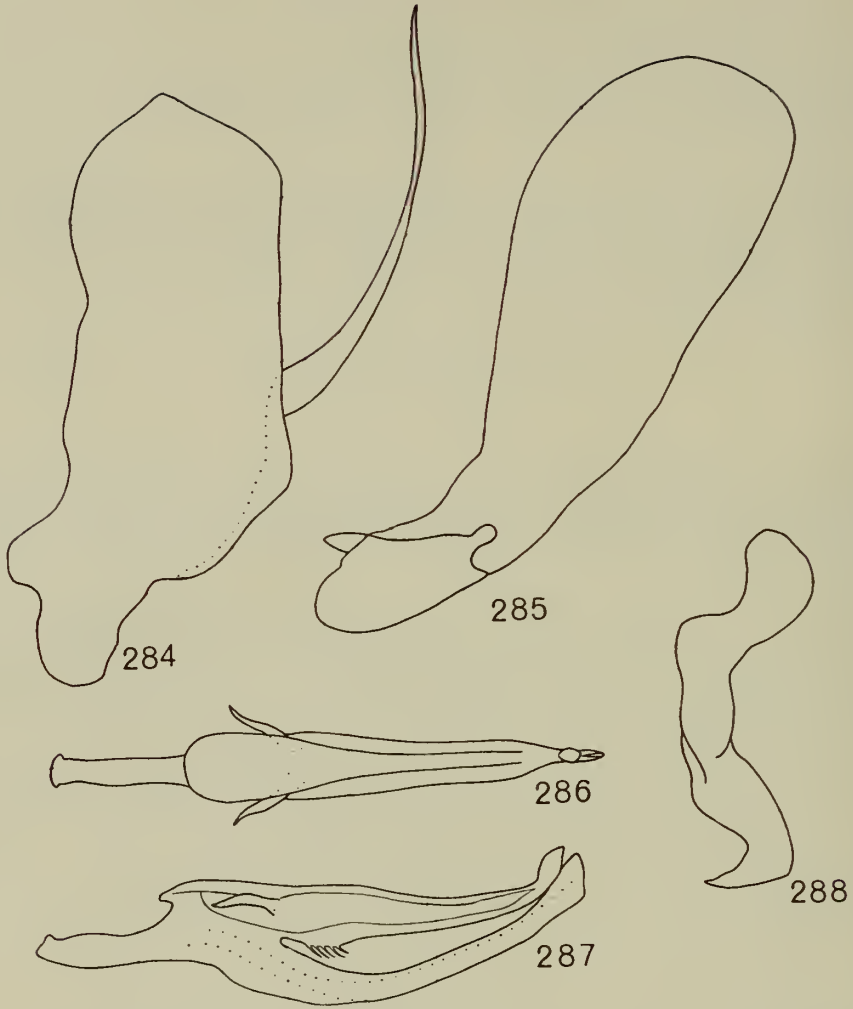
SPECIMENS EXAMINED.

Holotype ♂, BORNEO: north, Mt Kinabalu, Bembangan Trail, 18.iii.-4.iv.1964 (*S. Kueh*) (BMNH, London).

Paratypes. BORNEO: north, Mt Kinabalu, Mesilau Camp, 5000 ft, 1 ♂, 20-27.iii.1964 (*S. Kueh*) (BMNH, London); 1 ♂, same data as paratype, in author's collection.

BIOLOGY. Unknown.

REMARKS. *Tharra borneoensis* is very similar to *marlatti* in male genital characteristics, but can be separated from the latter species by the plate with distal appendage expanded apically and the style, which is hooked apically.



FIGS 284-288. *Tharra borneoensis* sp. n. 284, male pygofer, lateral view; 285, plate, lateral view; 286, aedeagus, dorsal view; 287, aedeagus, lateral view; 288, style, lateral view.

***Tharra quadrifida* sp. n.**

(Text-figs 289-293)

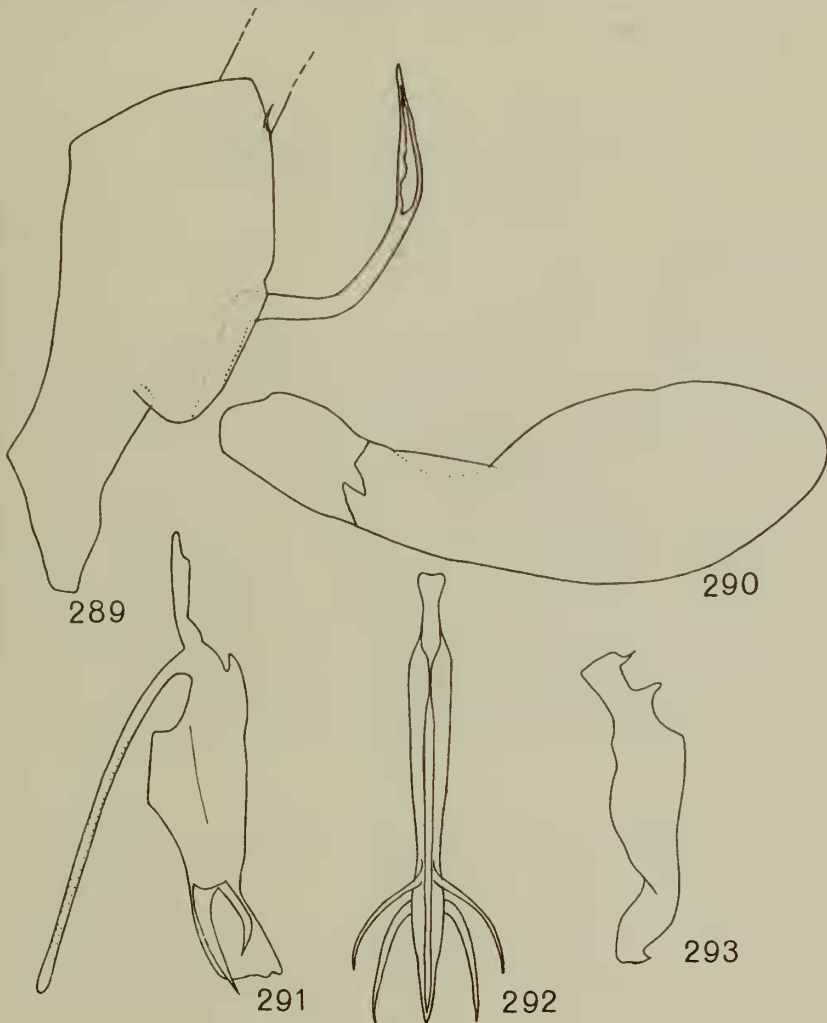
Length: ♂ 4.40 mm, ♀ unknown.

General colour testaceous, with several very small ochraceous spots on elytra. Crown testaceous; eyes deep rufous; pronotum and scutellum deep testaceous; elytra testaceous with several very small ochraceous spots in cells; clypeus and clypellus testaceous.

Head narrower than pronotum; crown long, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, lateral margins convergent basally, disk barely elevated above level of eyes; ocelli small, situated anteriorly;

eyes large, occupying about two-thirds entire dorsal area of head; pronotum short, median length less than median length of crown; scutellum short, median length slightly greater than median length of pronotum; elytra elongate, appendix well developed, veins prominent; clypeus long, somewhat swollen, lateral margin nearly parallel, constricted near antennal sockets, without median longitudinal carina, surface finely granulose, anterior margin narrowly rugulose; clypellus with lateral margin expanded distally.

Male pygofer in lateral aspect with long, narrow, curved process arising from caudoventral margin, process with lateral margins nearly equidistant, sharply pointed apically, inner lateral margin aperturized at apical half; aedeagus in lateral aspect with dorsal appendage very broad throughout; dorsal appendage with two pairs of subapical, long, lateral spines, basal pair short, curved, directed distad, distal pair long, straight, directed distad, ventral margin with truncate



FIGS 289-293. *Tharra quadrifida* sp. n. 289, male pygofer, lateral view; 290, plate, lateral view; 291, aedeagus, lateral view; 292, aedeagus, dorsal view; 293, style, lateral view.

basal flange, apex of appendage truncate; ventral appendage very long, narrow, tube-like, directed somewhat caudoventrad, extending beyond apex of dorsal appendage; gonopore apical; connective Y-shaped; style with short apical hook; plate with distal appendage elongate, slightly expanded medially.

SPECIMEN EXAMINED.

Holotype ♂, NEW GUINEA: Wisselmeren, Enarotadi, 1850-1900 m, 30.vii.1962 (*J. Sedlacek*) (BPBM, Honolulu).

BIOLOGY. Unknown.

REMARKS. This is a rare species and has distinctive aedeagal characters exhibited by two pairs of long spines on the aedeagus which separate *quadrifida* from all other species in the genus *Tharra*.

Tharra leucomelana (Walker) comb. n.

(Text-figs 294-298)

Coelidia leucomelana Walker, 1870 : 313. Holotype ♀, RAJA AMPAT Is. (West Irian) (BMNH, London) [examined].

Coelidia leucomelana Walker; Metcalf, 1964 : 56.

Length: ♂ 4.30-5.15 mm, ♀ 5.30-5.90 mm.

General colour testaceous with numerous pale, opaque, irregular small spots on elytra; sexual dimorphism apparent. Crown testaceous at anterior half, ochraceous at posterior half, especially in ♀; eyes light rufous to fuscous; pronotum testaceous in ♂, light ochraceous in ♀; scutellum testaceous in ♂, light fuscous in ♀; elytra deeply testaceous with numerous pale ivory irregular spots and a very narrow ochraceous band apically; clypeus and clypellus deeply testaceous in ♂, light fuscous in ♀; gena and lora ivory in both sexes.

Head narrower than pronotum; crown long and very narrow posteriorly, produced distally beyond anterior margin of eyes, distal length nearly one-third entire median length, striate radially, lateral margins converging basally, disk slightly depressed medially, elevated above level of eyes; ocelli small, situated anteriorly; eyes large, occupying over two-thirds entire dorsal area of head; pronotum short, median length much less than median length of crown, surface finely knobbed; scutellum small, median length slightly less than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus elongate with median longitudinal carina extending about half way from anterior margin to middle, lateral margins nearly parallel, constricted near antennal sockets, surface finely granulose, rugulose along anterior margin; clypellus with lateral margin broadly concave.

Male pygofer in lateral aspect with large, curved process arising from caudoventral margin, process slightly constricted medially, broad basally and apically, inner lateral margin aperturized entirely, striate at apical one-fourth, apex sharply pointed; aedeagus in lateral aspect with dorsal appendage broadly sinuate, margins nearly equidistant; dorsal appendage with a distinct dorsal, subapical flange, flange triangulate in dorsal aspect; ventral appendage very narrow, tube-like, curved, apex barely reaching apex of dorsal appendage; stem of aedeagus with a pair of distinct, ventral spines projecting distad and sharply pointed apically; gonopore apical; connective Y-shaped; style with short claw apically; plate with distal segment semiglobular at apical half.

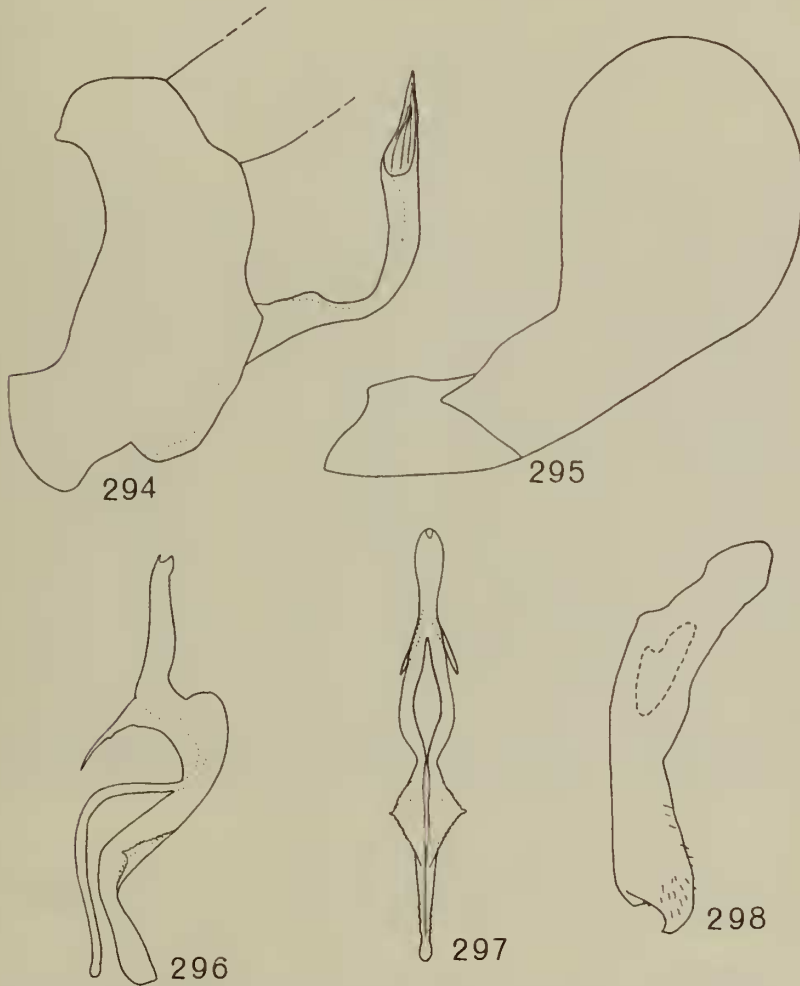
Female seventh sternum with posterior margin excised medially.

DISTRIBUTION. New Guinea, New Britain (new record).

SPECIMENS EXAMINED.

Coelidia leucomelana Walker, holotype ♀, RAJA AMPAT IS. (West Irian) (Wallace) (BMNH, London).

NEW GUINEA: Waris, S. of Hollandia, 450–500 m, 3 ♂, 2 ♀, 1–17.viii.1959 (T. C. Maa); Maprik, 160 m, 2 ♂, 29.xii.1959–17.i.1960 (T. C. Maa); Daulo Pass, 2400 m, 3 ♂, 7.vii.1963 (C. D. Michener & J. Sedlacek); Vogelkop, Fak-Fak, S. Coast of Bomberai, 10–100 m, 5 ♀, 12.vi.1959 (T. C. Maa); Papua, Brown R., 3 ♂, 20.viii.1959 (T. C. Maa); Papua, Brown R., E. of Pt Moresby, 100 m, 1 ♀, 8.vi.1955 (J. L. Gressitt); Eliptamin Valley, 1200–1350 m, 1 ♂, 19–30.vi.1959 (W. W. Brandt); S. Highlands, Dimifa, S.E. of Mt Giluwe, 2200 m, 1 ♂, 10.x.1958



FIGS 294–298. *Tharra leucomelana* (Walker). 294, male pygofer, lateral view; 295, plate, lateral view; 296, aedeagus, lateral view; 297, aedeagus, dorsal view; 298, style, lateral view.

(*J. L. Gressitt*); W. Highlands, Kubor Range, 3100 m, 1 ♀, 24.v.1956 (*J. L. Gressitt*); Feramin, 120 m, 1 ♀, 7-14.vi.1959 (*W. W. Brandt*); Papua, Keparr-Sengi nr Kokoda, 500 m, 1 ♂, 26.iii.1956 (*J. L. Gressitt*); Papua, Kiunga, Fly R., 1 ♀, 4-8.vii.1957 (*W. W. Brandt*); Papua, Owen Stanley Range, Goilala, Tororo, 1560 m, 2I-24.ii.1958 (*W. W. Brandt*). NEW BRITAIN: Yalom, 1000 m, 22.v.1962 (*Noona Dan Expn 61-62*).

BIOLOGY. Unknown. Collections were made from February through August.

REMARKS. This is a unique species having a large subapical flange on the dorsal margin of the dorsal appendage and a pair of long spines at the base of the stem of the aedeagus just basad of the origin of the ventral appendage, which distinguishes *leucomelana* from all other species of *Tharra*.

Tharra pustula sp. n.

(Text-figs 299-303)

Length: ♂ 4.40 mm, ♀ unknown.

General colour deep testaceous. Crown testaceous, eyes deeply fuscous; pronotum and scutellum deeply testaceous; elytra deeply testaceous with a few obscure, pale spots in cells, apex with very narrow ochraceous band; clypeus and clypellus deeply testaceous.

Head narrower than pronotum; crown long, very narrow basally, produced distally beyond anterior margin of eyes, distal length nearly one-third entire median length, striate radially, lateral margins slightly carinate, converging basally, disk slightly elevated above level of eyes; ocelli small, situated anteriorly; eyes large, occupying about two-thirds entire dorsal surface of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum moderate size, median length about equal to median length of pronotum; elytra elongate, veins somewhat obscured, appendix well developed, venation as in description of genus; clypeus elongate, lateral margins nearly parallel, constricted near antennal sockets, remnants of a median longitudinal carina extending anteriorly to near middle, surface finely granulose, anterior margin narrowly rugulose; clypellus with lateral margins nearly parallel.

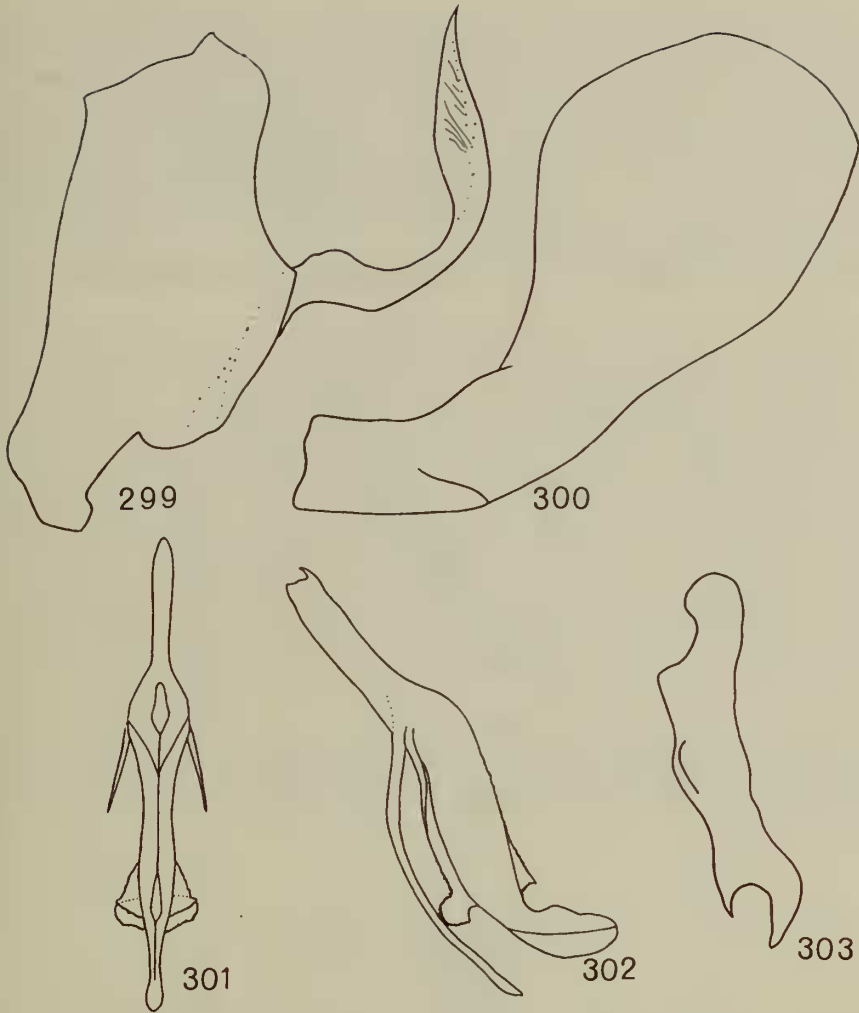
Male pygofer in lateral aspect with large, curved process arising from caudoventral margin, process constricted medially, broad basally, very broad at subapical half, aperturized on inner lateral margin at apical half and somewhat striate obtusely at apical half; aedeagus in lateral aspect with dorsal appendage constricted subapically, apical one-third elongate, somewhat expanded and curved dorsad; dorsal appendage with a pair of long, basal spines on lateral margin, spines sharply curved apically and directed distad, ventral margin of dorsal appendage with prominent ventral flange and a short flange on dorsal margin basad of apex, flanges serrate on outer margin; ventral appendage very long, narrow, tube-like, apex reaching apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with distal appendage elongate, somewhat globular at apical half.

SPECIMENS EXAMINED.

Holotype ♂, NEW GUINEA: E. Highlands, Purosa, 1700 m, 17-25.v.1966 (*Gressitt & Tawi*) (BPBM, Honolulu).

BIOLOGY. Unknown.

REMARKS. From *leucomelana*, to which it is similar in male genital characteristics, *pustula* can be separated by the presence of the long, lateral spines on the ventral margin of the dorsal appendage and the ventral subapical flange.



FIGS 299-303. *Tharra pustula* sp. n. 299, male pygofer, lateral view; 300, plate, lateral view; 301, aedeagus, dorsal view; 302, aedeagus, lateral view; 303, style, lateral view.

***Tharra gladia* sp. n.**

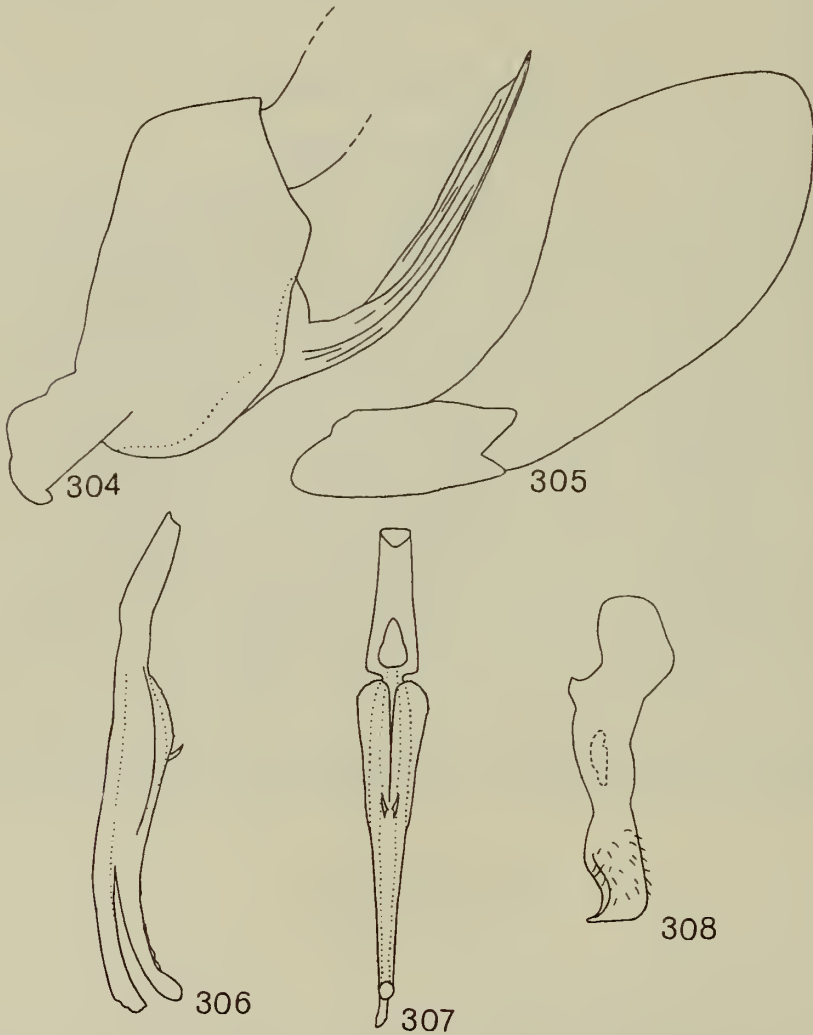
(Text-figs 304-308)

Length: ♂ 4.70-4.90 mm, ♀ 5.10-5.40 mm.

General colour testaceous in ♂, light ochraceous in ♀; sexual dimorphism apparent. Crown deep fuscous in ♂, light ochre in ♀; eyes fuscous in ♂, light testaceous in ♀; pronotum deep testaceous in ♂, fuscous in ♀; elytra deep testaceous in ♂ with a light fuscous marking at the apex of clavus, light fuscous in ♀ tinged with light testaceous apically; clypeus and clypellus ochraceous in ♂, fuscous to rufous in ♀.

Head markedly narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length slightly over one-fourth entire median length, striate radially, lateral margins nearly parallel, slightly depressed medially, disk elevated above level of eyes; ocelli small, situated anteriorly; eyes large, occupying over two-thirds entire dorsal area of head; pronotum short, median length about equal to median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins somewhat obscure, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, tapered posteriorly, without median longitudinal carina, surface finely granulose, rugulose along anterior margin; clypellus with lateral margins nearly parallel or slightly expanded apically.

Male pygofer in lateral aspect with a long, broad, slightly curved process arising from caudo-



FIGS 304-308. *Tharva gladia* sp. n. 304, male pygofer, lateral view; 305, plate, lateral view; 306, aedeagus, lateral view; 307, aedeagus, dorsal view; 308, style, lateral view.

ventral margin, process with lateral margins broad basally, tapering gradually to sharply pointed apex, aperturized along entire inner lateral margin, striate throughout; aedeagus in lateral aspect with dorsal appendage narrow throughout, slightly curved dorsally at apex; dorsal appendage with a pair of lateral flanges subbasally and a pair of short spines on dorsal margin subbasally; ventral appendage short, tube-like, apex reaching apex of dorsal appendage; gonopore apical; connective Y-shaped; style hooked apically; plate with terminal segment elongate, lateral margin expanded medially.

Female seventh sternum with posterior margin truncate.

SPECIMENS EXAMINED.

Holotype ♂, NEW GUINEA: Moife, 2100 m, 7-14.x.1959 (*T. C. Maa*) (BPBM, Honolulu).

Paratypes. NEW GUINEA: allotype ♀, same data as holotype (BPBM, Honolulu); Kassam, 1350 m, 48 km E. of Kainantu, 14 ♂, 1 ♀, 30.x.1959 (*T. C. Maa*); Daulo Pass area, 2500 m, 1 ♂, 4.vii.1957 (*D. Elmo Hardy*); Daulo Pass, 3000 m, Asaro-Chimbu Div., 2 ♀, 13.vi.1955 (*J. L. Gressitt*); Geroka Kabebe, 1800 m, 1 ♀, 24.vi.1955 (*J. L. Gressitt*); Moife, 2100 m, 1 ♀, 11-14.x.1959 (*T. C. Maa*); Moife, 2100 m, 15 km N.W. of Okapa, 1 ♀, 7-14.x.1959 (*T. C. Maa*); Gejam, 40 km W. of Hollandia, 100-200 m, 1 ♂, 1-10.iii.1960 (*T. C. Maa*); Wau, Mrobe Dist., Mt Missim, 2300 m, 1 ♀, 22.iii.1966 (*J. L. Gressitt*); E. end Saruwaged Ravine, 20 km S.S.W. Kabwum, 2550 m, 1 ♀, 5-12.viii.1966; Mt Otto, 2200 m, 1 ♂, 1 ♀, 24.vi.1955 (*J. L. Gressitt*) (BPBM, Honolulu); 1 ♂, 1 ♀, same data as holotype (BMNH, London); Kassam, 1350 m, 48 km E. of Kainantu, 1 ♂, 1 ♀, 7.xi.1959 (*T. C. Maa*), in author's collection.

BIOLOGY. Unknown.

REMARKS. From *villicaris*, to which it is similar in male genital characteristics, *gladia* can be separated by the presence of the dorsal flange situated subbasally on the dorsal appendage of the aedeagus and by the very broad aperturized pygofer spine.

Tharra villicaris sp. n.

(Text-figs 309-313)

Length: ♂ 6.70 mm, ♀ 6.90 mm.

General colour ochraceous. Crown light ochraceous; eyes light viridian; pronotum and scutellum ochraceous; elytra ochraceous, sometimes deep ochraceous in ♀; clypeus and clypellus ochraceous.

Head considerably narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, lateral margins nearly parallel, somewhat convex along middle, disk depressed medially, elevated considerably above level of eyes; ocelli large, situated anteriorly; eyes large, occupying about two-thirds entire dorsal area of head; pronotum short, median length slightly less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, lateral anterior margins carinate, lateral margins incised deeply near antennal sockets, without median longitudinal carina, surface finely granulate, rugulose along anterior margin; clypellus with lateral margins constricted medially.

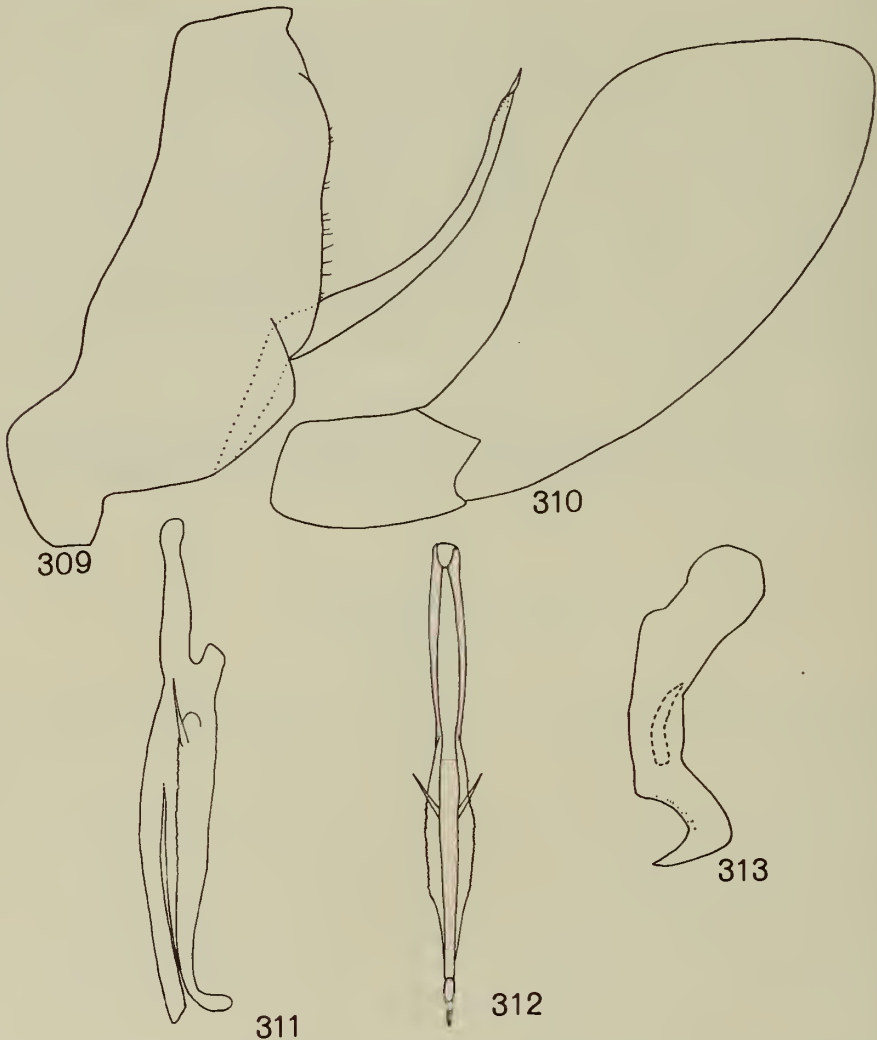
Male pygofer in lateral aspect with narrow, long, curved process arising from caudoventral

margin, process with lateral margins nearly equidistant throughout, sharply pointed apically; aedeagus in lateral aspect with dorsal appendage broad along basal three-fourths, constricted subapically, slightly enlarged apically and curved dorsad; dorsal appendage with a long, lateromedial flange, and with a pair of short, subapical dorsal spines projecting caudad; ventral appendage long, narrow, tube-like, apex extended just slightly beyond apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with distal segment elongate, very broad medially along dorsal margin.

Female seventh sternum with posterior margin produced medially.

SPECIMENS EXAMINED.

Holotype ♂, JAVA: Tjibodas, Mt Gede, 4300 ft, 1909 (*Bryant & Palmer*) (USNM, Washington).



FIGS 309-313. *Tharra villicaris* sp. n. 309, male pygofer, lateral view; 310, plate, lateral view; 311, aedeagus, lateral view; 312, aedeagus, dorsal view; 313, style, lateral view.

Paratypes. JAVA: allotype ♀, same data as holotype ♂ (USNM, Washington); 2 ♀, same data as holotype (USNM, Washington); Tjibodas, 1 ♂, xii.1908 (*Terry*), in author's collection.

BIOLOGY. Unknown.

REMARKS. *Tharra villicaris* is similar in general habitus to *dorsimacula* but can be separated from that species by the presence of the lateromedial flange and pair of spines on the dorsal appendage of the aedeagus.

Tharra straminea (Osborn) **comb. n.**

(Text-figs 314-318)

Jassoidula straminea Osborn, 1934a : 183. Holotype ♀, SAMOA: Tutuila (BPBM, Honolulu) [examined].

Jassoidula infuscata Osborn, 1934a : 185. Holotype ♂, SAMOA: Tutuila (BPBM, Honolulu) [examined]. **Syn. n.**

Jassoidula straminea Osborn; Metcalf, 1964 : 83.

Jassoidula infuscata Osborn; Metcalf, 1964 : 83.

Jassoidula straminea Osborn; DeLong, 1969 : 464.

Length: ♂ 5.90-6.30 mm, ♀ 6.60-6.90 mm.

General colour ochraceous. Crown light ochraceous; pronotum and scutellum deep ochraceous; elytra ochraceous with an uneven, broad fuscous band subapically; eyes light fuscous to deep fuscous; clypeus and clypellus ochraceous.

Head narrower than pronotum; crown produced considerably beyond anterior margin of eyes, distal length slightly over one-third entire median length, striate radially, slightly depressed medially, lateral margins somewhat concave and slightly convergent basally, disk elevated above eyes; ocelli large, situated anteriorly; eyes moderate size, somewhat elongate, occupying slightly less than one-third entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus elongate, very broad anteriorly, narrowed posteriorly, slightly excised along middle near antennal sockets, without median longitudinal carina, surface finely granulose, rugulose along anterior margin; clypellus with lateral margins broadly expanded apically.

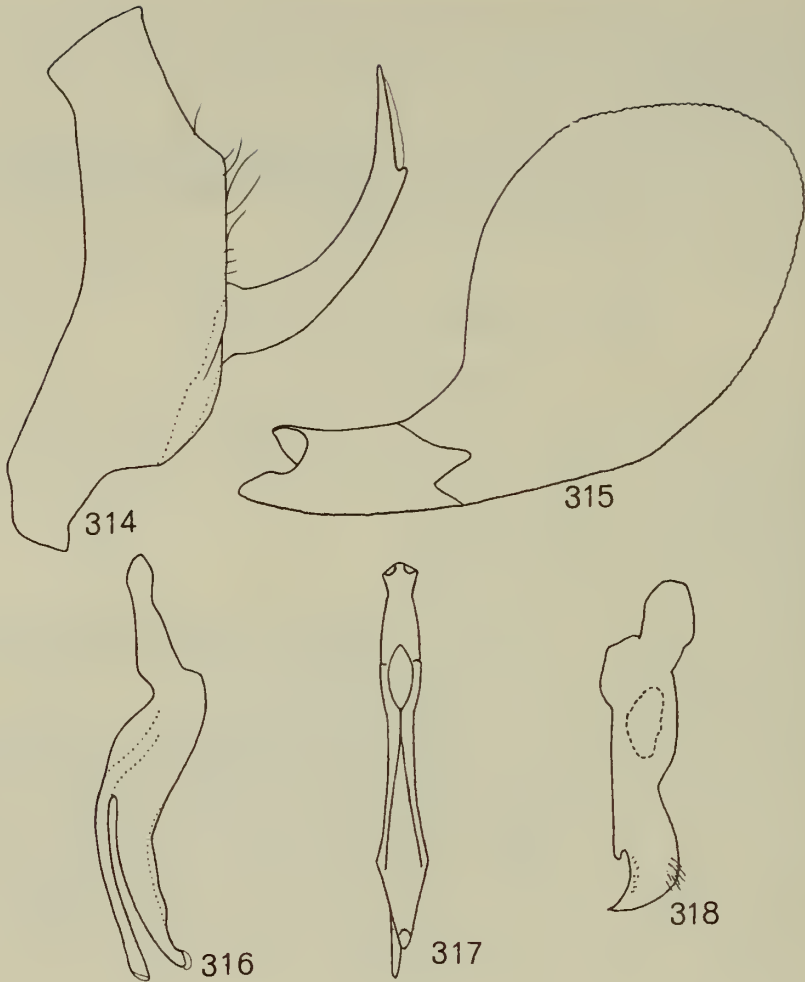
Male pygofer in lateral aspect with long, broad, curved process arising from caudodorsal margin, process with lateral margins nearly equidistant throughout except for apical one-third, outer lateral margin indented subapically, becoming narrowly attenuated apically, usually aperturized on outer subapical margin; aedeagus in lateral aspect with dorsal appendage somewhat broad at basal half, becoming narrowly attenuated apically, slightly curved dorsad, without spines or flanges; ventral appendage long, narrow, tube-like, apex slightly expanded and sometimes extending slightly beyond apex of dorsal appendage; gonopore apical; connective Y-shaped; style broadly hooked apically; male plate with distal segment somewhat elongate, curved dorsad and rather broad medially.

Female seventh sternum with posterior margin slightly produced medially.

DISTRIBUTION. Samoa.

SPECIMENS EXAMINED.

Jassoidula straminea Osborn, holotype ♀, allotype ♂, 1 ♂, 2 ♀ paratypes, SAMOA: Tutuila, Pago-Pago, 760-900 ft, 30.ix.1923 (*Swezey & Wilder*) (BPBM, Honolulu).



FIGS 314-318. *Tharva straminea* (Osborn). 314, male pygofer, lateral view; 315, plate, lateral view; 316, aedeagus, lateral view; 317, aedeagus, dorsal view; 318, style, lateral view.

Jassoidula infuscata Osborn, holotype ♂, SAMOA: Tutuila, 900-1200 ft, centre of island, 30.vi.1918 (*Kellers*) (BPBM, Honolulu).

SAMOA: Tutuila, Vatia Tr., 1 ♂, 1 ♀, ii. 1930 (*D. T. Fulloway*); Tutuila, Faga-Togo, 1000 ft, 1 ♂, 28.viii.1940 (*C. H. Swezey*); Tutuila, Faga-Togo Tr. Reservoir, 2 ♂, iii. 1930 (*D. T. Fulloway*); Tutuila, Ahua-Afono Tr., 2 ♂, 2 ♀, iii. 1930 (*D. T. Fulloway*); Tutuila, Moloata, 1 ♀, 27.viii.1940 (*E. C. Zimmerman*); Tutuila, Mt Alava, 500 m, 1 ♂, 20-24.ii.1965 (*G. A. Samuelson*).

The allotype male of *Jassoidula straminea* was properly associated with the holotype female of the same species. Dissection of the allotype male of *straminea* and comparison of it with the holotype male of *Jassoidula infuscata* revealed that

both species were identical in male genital characteristics. *Jassoidula straminea* is the valid name of the species by priority of pagination.

BIOLOGY. Unknown. Collection records indicate that the species is prevalent from March to August.

REMARKS. From *transversa*, to which it is similar in general habitus, *straminea* may be separated by the presence of the aperturized apical pygofer process and the curved plate which is expanded medially.

Tharra vesiculata sp. n.

(Text-figs 319-323)

Length: ♂ 4.70-5.10 mm, ♀ 5.60-5.90 mm.

General colour deep fuscous to testaceous. Crown light ochre; pronotum, scutellum and elytra fuscous to deep testaceous; clypeus and clypellus fuscous to deep testaceous.

Head slightly wider than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length less than one-third entire median length, striate radially, lateral margins converging basally, slightly depressed medially, disk elevated above level of eyes; ocelli small, situated anteriorly; eyes large, occupying about two-thirds of entire dorsal area of head; pronotum medium size, median length about equal to median length of crown; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus elongate, very broad anteriorly, narrowed posteriorly, without median longitudinal carina, constricted medially near antennal sockets, surface finely granulose along posterior two-thirds, rugulose along anterior one-third; clypellus with lateral margins nearly parallel.

Male pygofer in lateral aspect with short, curved, broad process arising from caudoventral margin, process with lateral margins about equidistant along basal three-fourths, expanded subapically, aperturized along inner lateral margin at apical one-third, and striate; aedeagus in lateral aspect with dorsal appendage broad at basal one-quarter, narrowly attenuated and tube-like at apical three-fourths, curved posteriodorsally; dorsal appendage without spines or flanges; ventral appendage long, narrow, tube-like, reaching apex of dorsal appendage, not closely appressed to dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with distal segment very broad, subquadrate.

Female seventh sternum with posterior margin truncate, notched at middle.

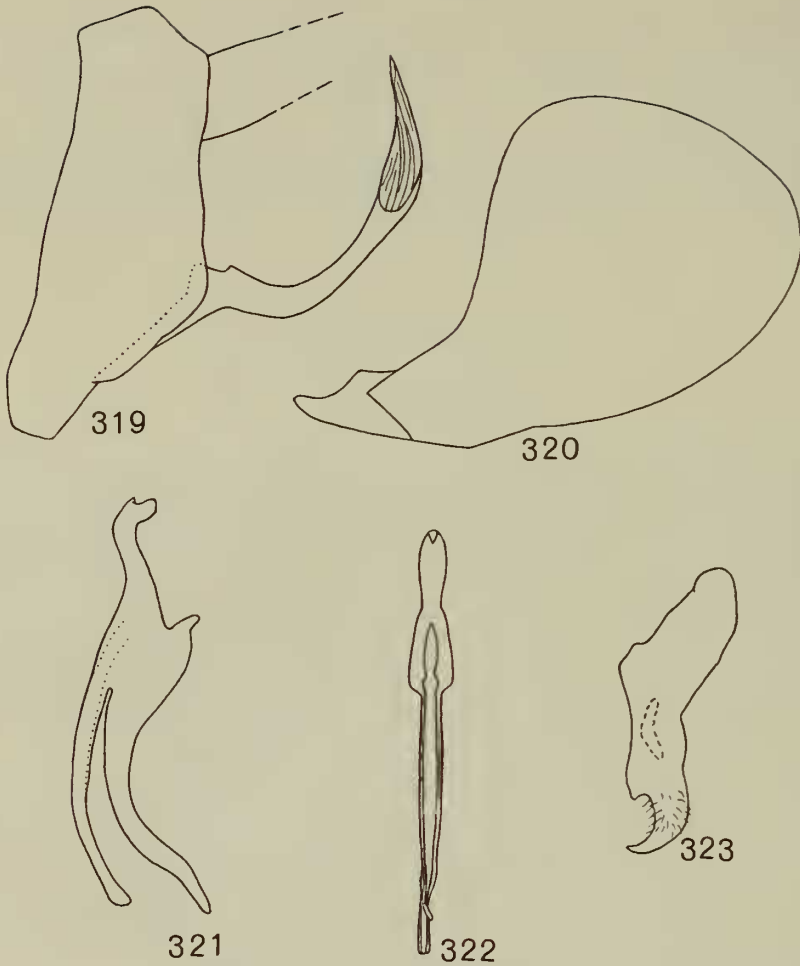
SPECIMENS EXAMINED.

Holotype ♂, NEW CALEDONIA: Vallée d'Amoa, 1.ii.1963 (*C. M. T. Yoshimoto*) (BPBM, Honolulu).

Paratypes. NEW CALEDONIA: allotype ♀, Mt stream up Boulari R., light trap, 3.xi.1958 (*C. R. Joyce*) (BPBM, Honolulu); Mt Panier, 270-500 m, 1 ♂, 9.x.1967 (*J. & M. Sedlacek*); Mt Koghi, 450-600 m, 4-6.x.1967 (*J. & M. Sedlacek*) (BPBM, Honolulu); Mt Koghi, 500 m, 1 ♂, 29.xi.1963 (*R. Straatman*); Plum, 20-60 m, 1 ♀, 23-25.iii.1968 (*T. C. Maa*), in author's collection.

BIOLOGY. Unknown.

REMARKS. This species is similar in male genital characteristics to *danae* and can be separated from that species by the distinct, clawed apex of the style and separation of the ventral appendage from the dorsal appendage of the male aedeagus.



FIGS 319-323. *Tharra vesiculata* sp. n. 319, male pygofer, lateral view; 320, plate, lateral view; 321, aedeagus, lateral view; 322, aedeagus, dorsal view; 323, style, lateral view.

***Tharra maai* sp. n.**

(Text-figs 324-328)

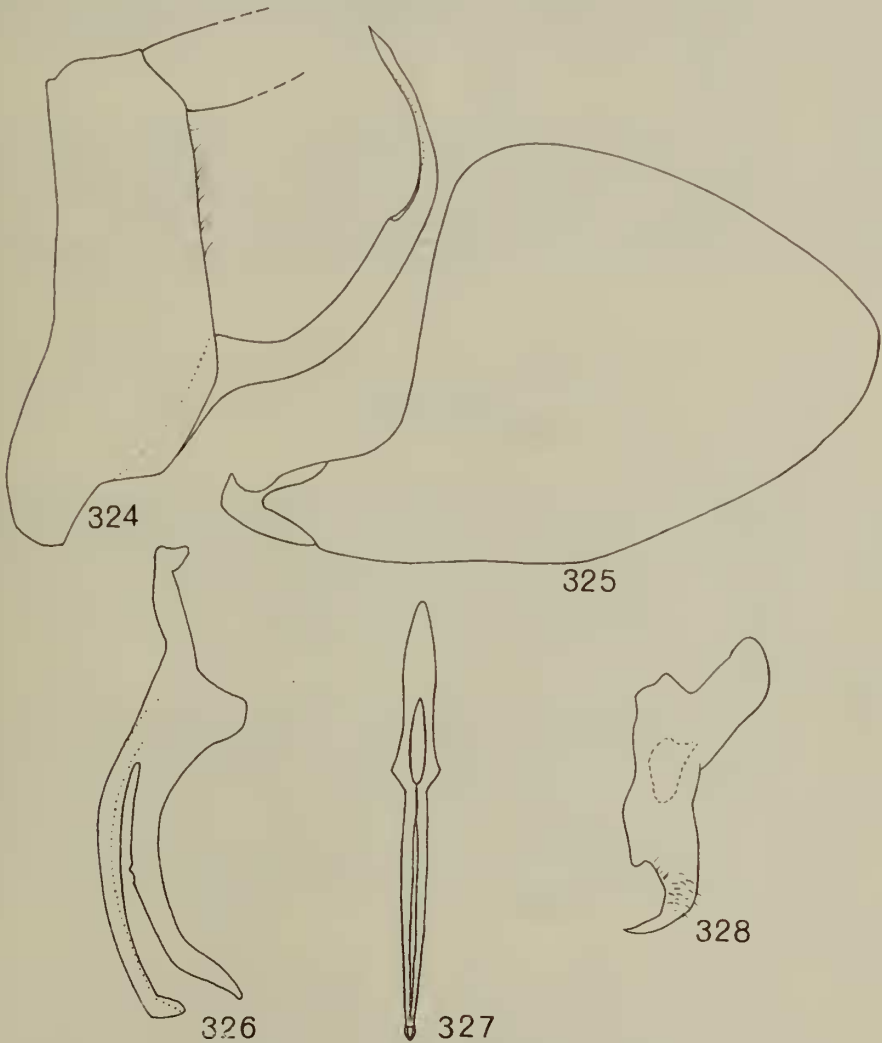
Length: ♂ 5.60-5.70 mm, ♀ unknown.

General colour ochraceous. Crown light ochraceous; pronotum deep ochraceous; scutellum light ochraceous with deep ochraceous areas at lateral angles; eyes fuscous; pronotum ochraceous, veins fuscous; clypeus and clypellus ochraceous.

Head distinctly narrower than pronotum; crown long and slender, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, lateral margins converging basally, disk with slight depression medially, elevated above level of eyes; eyes medium size, occupying a little over half of entire dorsal area of head; pronotum large, median length greater than median length of crown, surface finely knobbed; scutellum large, median length slightly greater than median length of pronotum; elytra elongate, veins

prominent, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, without median longitudinal carina, surface finely granulose at posterior half, rugulose at anterior half; clypellus with lateral margins expanded apically.

Male pygofer in lateral aspect with long, narrow, curved process arising from caudoventral margin, process with lateral margins nearly equidistant at basal two-thirds, inner lateral margin aperturized at apical one-third, apex pointed; aedeagus in lateral aspect with dorsal appendage broad at basal one-fourth, narrow and somewhat tube-like at apical three-fourths, slightly curved apically and pointed at apex; dorsal appendage with ventral margin dentate medially; ventral appendage long, tube-like, curved dorsad at apex, reaching apex of dorsal appendage; gonopore terminal; connective Y-shaped; style clawed apically; plate with terminal segment very broad, subquadrate, anterior margin truncate, posterior margin narrowly convex.



FIGS 324-328. *Tharra maai* sp. n. 324, male pygofer, lateral view; 325, plate, lateral view; 326, aedeagus, lateral view; 327, aedeagus, dorsal view; 328, style, lateral view.

SPECIMENS EXAMINED.

Holotype ♂, NEW CALEDONIA: Mt Panier Trail, 8-9.ii.1963 (*N. L. H. Krauss*) (BPBM, Honolulu).

Paratypes. NEW CALEDONIA: 6 km N. of Paita, 1 ♂, 25.i.1963 (*N. L. H. Krauss*); Col d'Amieu, 130 km N. of Noumea, 350-650 m, 1 ♂, 13.xi.1963 (*R. Straatman*); Foret di Thy, 1 ♂, 30.x.1967 (*J. & M. Sedlacek*); Mt Koghi, 1 ♂, 15.ii.1963 (*N. L. H. Krauss*); on heights between Thio and Nakety, 3 ♂, 12.xi.1958 (*C. R. Joyce*); Col des Piroque, 2 ♂, 14.ii.1963 (*N. L. H. Krauss*); Mts des Koghis, 400-600 m, 2 ♂, i. 1969 (*N. L. H. Krauss*); Plateau do Dogny, 2 ♂, 29.iii.1968 (*T. C. Maa*) (BPBM, Honolulu); Col d'Amieu, 650 m, 2 ♂, 31.iii.1968 (*J. L. Gressitt & T. C. Maa*) (BMNH, London); Mt des Koghis, 400-600 m, 2 ♂, i. 1969 (*N. L. H. Krauss*), in author's collection. LOYALTY IS.: Lifou nr We (Oue), 2-35 m, 2 ♂, 26-28.iii.1968 (*T. C. Maa*) (BPBM, Honolulu).

BIOLOGY. Unknown.

REMARKS. From *gressitti*, to which it is similar in male genital characteristics, *maai* can be separated by the presence of a dentate ventral margin of the dorsal appendage of the aedeagus, and by the long, narrow crown.

This species is named for Dr T. C. Maa who collected much of the material treated herein.

***Tharra caledoniensis* sp. n.**

(Text-figs 329-333)

Length: ♂ 4.60 mm, ♀ 4.70 mm.

General colour testaceous to ochraceous; sexual dimorphism apparent. Crown ochraceous in both sexes; pronotum deep testaceous in ♂, light ochraceous in ♀; scutellum deep testaceous in ♂, ochraceous in ♀ with three testaceous spots anteriorly; elytra ochraceous at basal two-thirds, and deeply testaceous at apical one-third in ♂, pale ochraceous with veins deeply marked with testaceous in ♀; clypeus ochraceous at apical one-third, deeply testaceous at basal two-thirds, ochraceous throughout in ♀; clypellus deeply testaceous in ♂, ochraceous in ♀ with a longitudinal testaceous band medially.

Head slightly narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length about one-fourth entire median length, striate radially, lateral margins converging basally, disk elevated above eyes; ocelli small, situated anteriorly; eyes very large, occupying over two-thirds entire dorsal area of head; pronotum large, median length greater than median length of crown, surface finely knobbed; scutellum large, median length about equal to median length of pronotum; elytra elongate, veins somewhat obscured, appendix narrowed, not well developed, venation as in description of genus; clypeus elongate, very broad anteriorly, narrowed posteriorly, without median longitudinal carina, surface finely granulose at basal two-thirds, rugulose at apical one-third; clypellus with lateral margins expanded apically.

Male pygofer in lateral aspect with a short, broad, curved process arising from caudoventral margin, process with lateral margins equidistant at basal two-thirds, broadening at apical one-third, aperturized at apical one-third on inner lateral margin; aedeagus in lateral aspect with dorsal appendage broad at basal two-thirds, narrowed and constricted at apical one-third, tube-like and curved at apical one-third; dorsal appendage without spines or flanges; ventral appendage long, narrow, tube-like, curved dorsad at apex, reaching apex of dorsal appendage;

gonopore apical; connective Y-shaped; style with apex hooked; plate with distal segment very broad apically, nearly subquadrate.

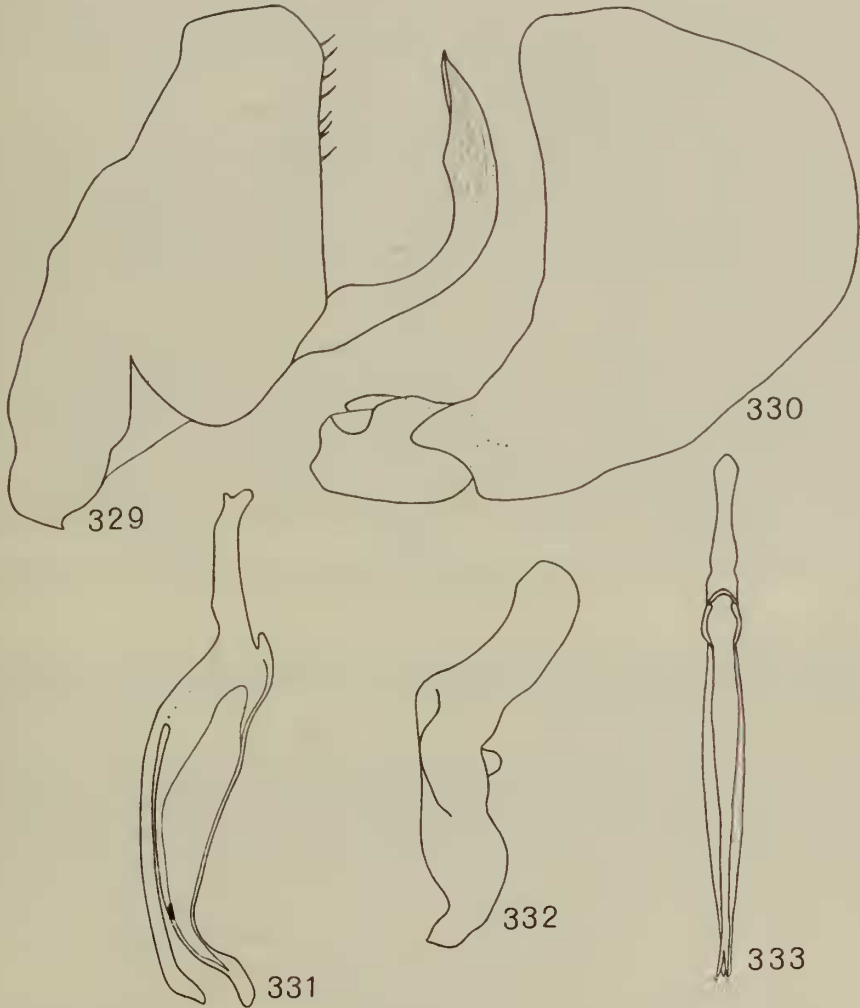
Female seventh sternum with posterior margin nearly truncate, excised medially.

SPECIMENS EXAMINED.

Holotype ♂, NEW CALEDONIA: Plum, 20-60 m, 23-25.iii.1968 (*T. C. Maa*) (BPBM, Honolulu).

Paratypes. NEW CALEDONIA: allotype ♀, same data as holotype (BPBM, Honolulu); 4 ♀, same data as holotype (BPBM, Honolulu).

BIOLOGY. Unknown.



FIGS 329-333. *Tharra caledoniensis* sp. n. 329, male pygofer, lateral view; 330, plate, lateral view; 331, aedeagus, lateral view; 332, style, lateral view; 333, aedeagus, dorsal view.

REMARKS. From *danae*, to which it is similar in male genital characteristics, *caledoniensis* can be separated by the presence of the broad, short pygofer process, and the rounded, convex posterior margin of the male plate.

Tharra danae sp. n.

(Text-figs 334-338)

Length: ♂ 3.70-4.00 mm, ♀ 4.40-4.90 mm.

General colour deep testaceous in ♂, light fuscous in ♀; sexual dimorphism apparent. Crown ochraceous in both sexes; pronotum deep testaceous in ♂, light fuscous in ♀; scutellum deep testaceous in ♂, ochraceous with a deep testaceous anterior spot in ♀; elytra deep testaceous in ♂, elytra light fuscous with testaceous veins in ♀; clypeus ochraceous at anterior half, deeply testaceous at posterior half, completely ochraceous in ♀; clypellus deeply testaceous in ♂, ochraceous in ♀ with fuscous T-shaped spot.

Head slightly narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length a little over one-fourth entire median length, striate radially, lateral margins converging basally, disk elevated above level of eyes; ocelli small, situated anteriorly; eyes very large, occupying well over two-thirds entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; clypeus elongate, broad anteriorly, narrowed posteriorly, without median longitudinal carina, finely granulose at apical three-fourths, rugulose at anterior one-fourth; clypellus with lateral margins nearly parallel.

Male pygofer in lateral aspect with a short, strongly curved process, process with lateral margins broad basally, constricted medially and very broad apically, aperturized at apical one-third, apex pointed; aedeagus in lateral aspect with dorsal appendage broad at apical two-thirds, narrowly constricted at apical one-third, narrowed tube-like at apical one-third, slightly curved; dorsal appendage without spines or flanges; ventral appendage long, narrow, tube-like, closely appressed to dorsal appendage, apex reaching apex of dorsal appendage; gonopore apical; connective Y-shaped; style hooked apically; plate with distal segment very broad apically, subquadrate.

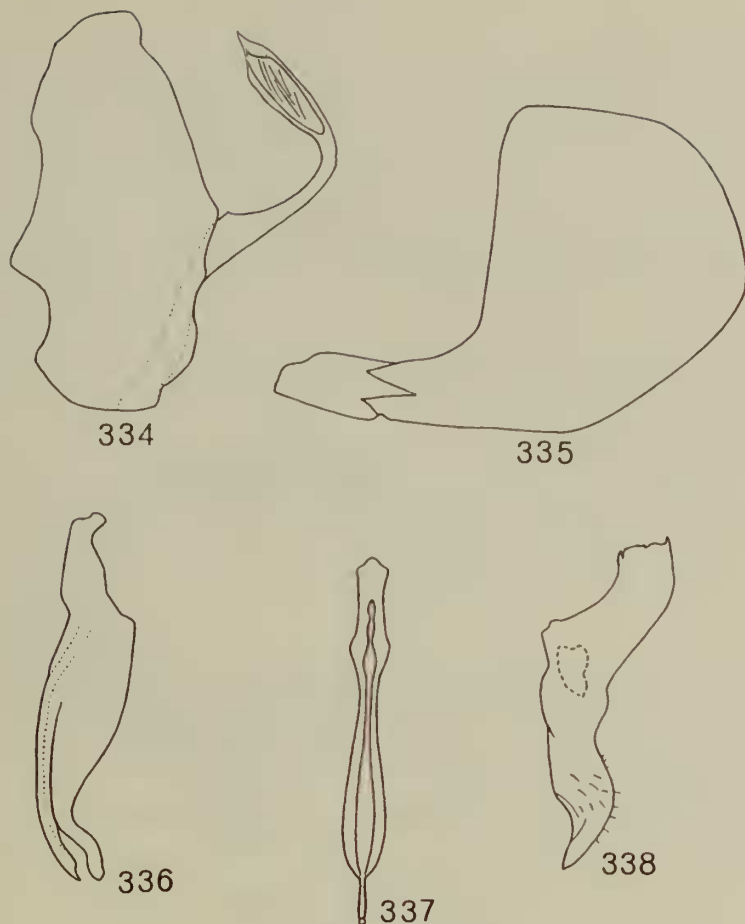
Female seventh sternum with posterior margin slightly produced medially, slightly notched medially.

SPECIMENS EXAMINED.

Holotype ♂, NEW CALEDONIA: mountain stream up Boulari R., light-trap, 3.xi.1958 (*C. R. Joyce*) (BPBM, Honolulu).

Paratypes. NEW CALEDONIA: allotype ♀, same data as holotype (BPBM, Honolulu); 1 ♀, same data as holotype; Mt Koghi, 500-800 m, 2 ♂, 23-27.x.1967 (*J. & M. Sedlacek*); Mt des Koghis, 1 ♀, 400-600 m, i. 1969 (*N. L. H. Krauss*); Mt des Koghis, 600-900 m, 1 ♀, 19.iii.1968 (*T. C. Maa*); Col d'Amieu, 650 m, 2 ♀, 31.iii.1968 (*J. L. Gressitt & T. C. Maa*); Col d'Amieu, 130 km N. of Noumea, 350-650 m, 1 ♀, 13.xi.1963 (*R. Straatman*); La Caulee, 1 ♀, 23.i.1963 (*C. M. Yoshimoto*); Mokoue, 150 m, 2 ♀, 20-22.iii.1968 (*T. C. Maa*); Plaine des Lacs, 1 ♀, 2.ii.1963 (*J. L. Gressitt*); Mokoue to Dothio, 150-500 m, 2 ♀, 20-22.iii.1968 (*J. L. Gressitt & T. C. Maa*) (BPBM, Honolulu); Mt des Koghis, 400-600 m, 1 ♂, 1 ♀, i. 1969 (*N. L. H. Krauss*) (BMNH, London); Mt Koghi, 1 ♂, i. 1962 (*N. L. H. Krauss*); Mt Koghi, 500-800 m, 1 ♀, 23-27.x.1967 (*J. & M. Sedlacek*), in author's collection.

BIOLOGY. Unknown.



FIGS 334-338. *Tharra danae* sp. n. 334, male pygofer, lateral view; 335, plate, lateral view; 336, aedeagus, lateral view; 337, aedeagus, dorsal view; 338, style, lateral view.

REMARKS. This species is closely related to other species from New Caledonia, but can be separated from those by the presence of a short, strongly curved pygofer process which is aperturized at the apical one-third, and by the subquadrate plate.

This species is named for Mrs Dana Yenson who illustrated species treated herein.

***Tharra curtisi* sp. n.**

(Text-figs 339-343)

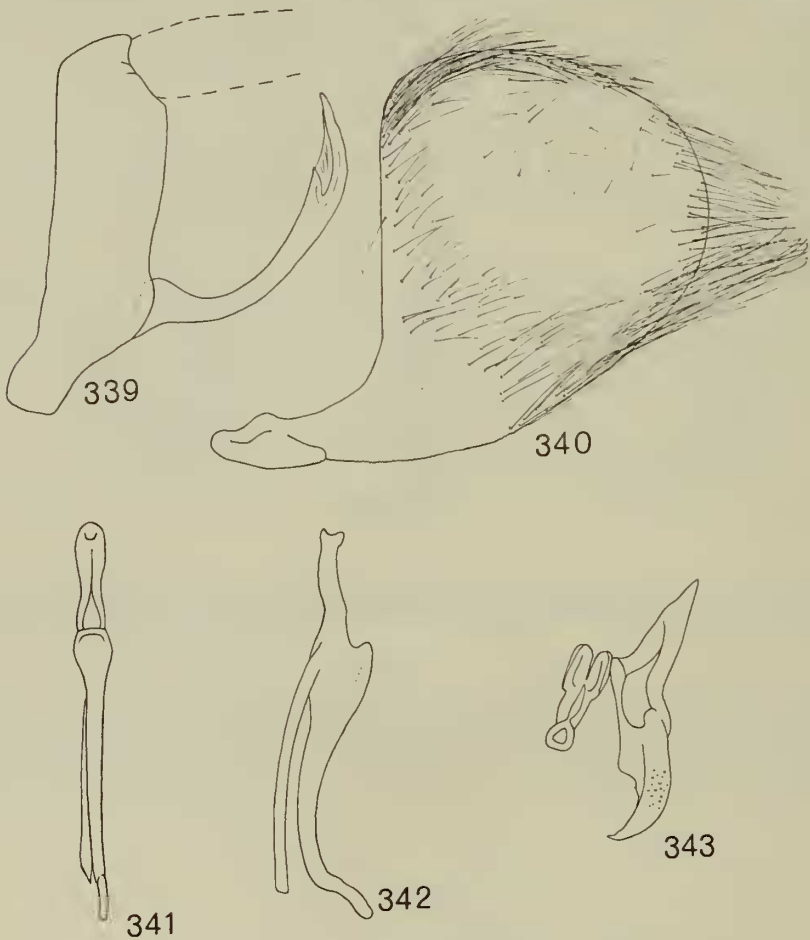
Length: ♂ 5.30-5.70 mm, ♀ 5.70-6.10 mm.

General colour ochraceous to fuscous. Crown deep ochraceous; eyes light rufous; pronotum and scutellum deep ochraceous; elytra deep ochraceous, suffused with a broad

fuscous band along the lateral margins; clypeus and clypellus light ochraceous with a narrow fuscous band along middle in ♀.

Head narrower than pronotum; crown short and broad, produced distally beyond anterior margin of eyes, distal length a little over one-fourth entire median length, striate radially, lateral margins converging basally, disk elevated above level of eyes; ocelli moderate size, situated anteriorly; eyes large, somewhat globular, occupying nearly two-thirds entire dorsal area of head; pronotum large, median length slightly greater than median length of crown; surface finely knobbed; scutellum large, median length about equal to median length of pronotum; elytra elongate, veins somewhat obscured, appendix extremely well developed, venation as in description of genus; clypeus elongate, very broad anteriorly, narrowed posteriorly, slightly excised along middle near antennal sockets, without median longitudinal carina, surface finely granulose, rugulose along anterior margin; clypellus with lateral margins expanded apically.

Male pygofer in lateral aspect with long, curved process arising from caudoventral margin,



FIGS 339-343. *Tharra curtisi* sp. n. 339, male pygofer, lateral view; 340, plate, lateral view; 341, aedeagus, dorsal view; 342, aedeagus, lateral view; 343, style and connective, dorsolateral view.

process with lateral margins nearly equidistant throughout except subapically, which is expanded, becoming narrowly attenuated apically, lateral inner subapical margin aperturized; aedeagus in lateral aspect with dorsal appendage broad at basal half, narrowly attenuated and sharply pointed apically, distinctly curved caudodorsally, without spines or flanges; ventral appendage very narrow, long, tube-like, separated from the dorsal appendage and extending to the apex of the dorsal appendage; gonopore apical; connective Y-shaped; style broadly hooked apically; plate with distal segment subquadrate.

Female seventh sternum with posterior margin slightly produced medially.

SPECIMENS EXAMINED.

Holotype ♂, LOYALTY IS: Lifou, near We (Oue), 2-35 m, 26-28.iii.1968 (*T. C. Maa*) (BPBM, Honolulu).

Paratypes. LOYALTY IS.: allotype ♀, same data as holotype (BPBM, Honolulu); 1 ♂, 1 ♀, same data as holotype, in author's collection. NEW CALEDONIA: 5 ♂, same data as holotype; Mts des Koghis, 400-600 m, 2 ♂, 11 ♀, i. 1969 (*N. L. H. Krauss*); Mt Koghi, 1 ♀, iii. 1959 (*N. L. H. Krauss*); Forêt de Thy, 550 m, 1 ♂, 1.iii.1960 (*J. L. Gressitt*); Yiambi, N.E., 500-700 m, 2 ♂, 14.x.1967 (*J. Sedlacek*); Plateau de Dogny, 1 ♂, 2 ♀, 31.i.1969 (*N. L. H. Krauss*) (BPBM, Honolulu); Yiambi, N.E., 1-50 m, 1 ♂, 1 ♀, 15.x.1967 (*J. & M. Sedlacek*) (BMNH, London).

BIOLOGY. Unknown. Collection records indicate that this species is prevalent from January to March.

REMARKS. This species is similar in general habitus to a number of species from the Loyalty and New Caledonia Islands. However, it can be separated from them by the unique male aedeagus which has the ventral appendage distinctly separated from the dorsal appendage, and its large size with very short, broad crown.

This species is named for Mr L. B. Curtis, District Entomologist, Pima County, Arizona.

Tharra gressitti sp. n.

(Text-figs 344-348)

Length: ♂ 5.70-6.00 mm, ♀ 6.90-7.10 mm.

General colour ochraceous to deep fuscous. Crown, pronotum and scutellum ochraceous; eyes deep fuscous; elytra with entire clavus ochraceous, remainder of forewing deep fuscous; clypeus and clypellus ochraceous.

Head narrower than pronotum; crown long and broad, produced distally beyond anterior margin of eyes, distal length less than one-third entire median length, striate radially, lateral margins converging basally, slightly depressed medially, disk elevated above level of eyes; ocelli small, situated anteriorly; eyes very large, occupying over two-thirds entire dorsal area of head; pronotum large, median length greater than median length of crown, surface finely knobbed; scutellum large, median length slightly greater than median length of pronotum; elytra elongate, veins somewhat obscured, appendix well developed, venation as in description of genus; clypeus elongate, very broad anteriorly, narrowed posteriorly, without median longitudinal carina, surface finely granulose at posterior two-thirds, rugulose along anterior third; clypellus with lateral margins expanded apically.

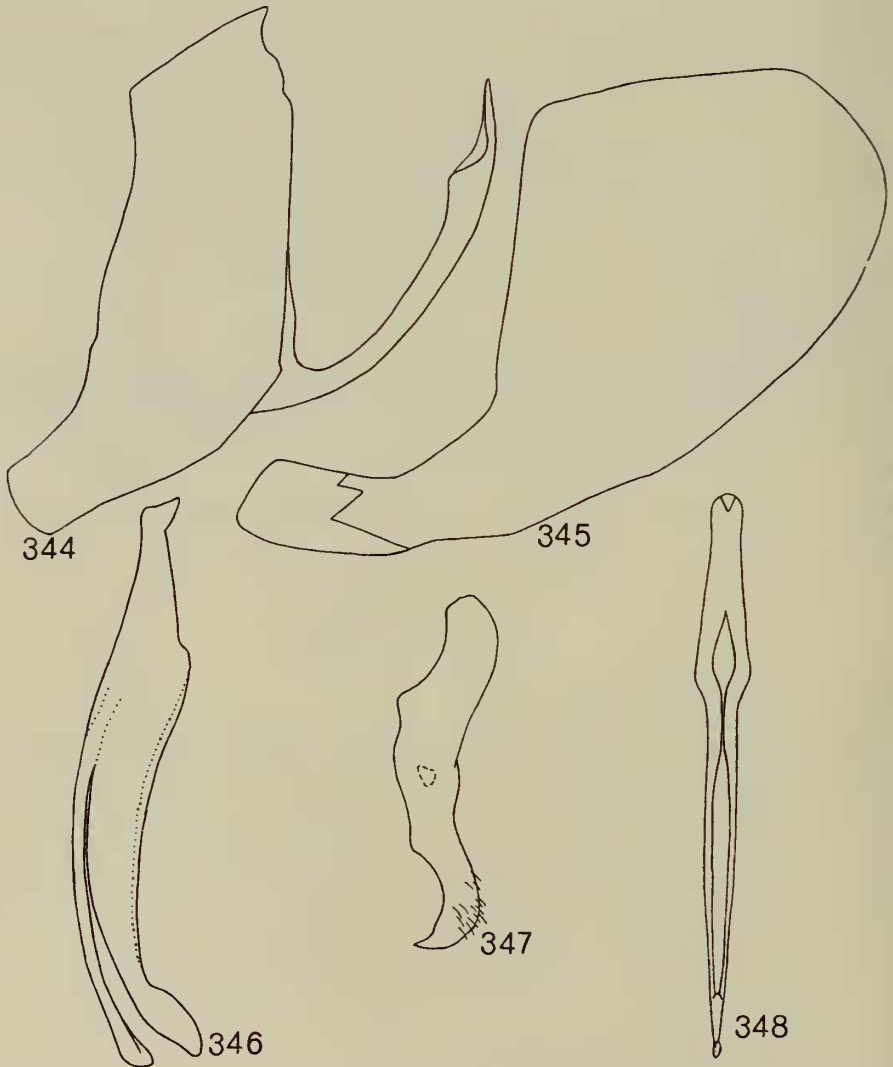
Male pygofer in lateral aspect with long, curved, broad process arising from caudoventral margin, process with lateral margins broad basally, narrowed subbasally, becoming enlarged subapically with prominent aperture on inner subapical lateral margin; aedeagus in lateral

aspect with dorsal appendage broad at basal three-fourths, attenuated at apical fourth, apex enlarged and curved caudodorsally; dorsal appendage without spines or flanges; ventral appendage very narrow, tube-like, long, expanded apically, reaching apex of dorsal appendage; gonopore apical; connective Y-shaped; style broadly clawed apically; plate with distal segment enlarged apically, subquadrate, anterior margin truncate, posterior margin broadly convex.

Female seventh sternum with posterior margin nearly truncate, excised medially.

SPECIMENS EXAMINED.

Holotype ♂, NEW CALEDONIA: Vallée d'Amoa, 7.ii.1963 (C. M. Yoshimoto) (BPBM, Honolulu).



FIGS 344-348. *Tharra gressitti* sp. n. 344, male pygofer, lateral view; 345, plate, lateral view; 346, aedeagus, lateral view; 347, style, lateral view; 348, aedeagus, dorsal view.

Paratypes. NEW CALEDONIA: allotype ♀, Mts des Koghis, 400–600 m, i. 1969 (*N. L. H. Krauss*) (BPBM, Honolulu); 1 ♂, same data as holotype; 9 ♂, 6 ♀, same data as allotype; Col de Pirogue, 3 ♀, 23.i.–13.ii.1962 (*N. L. H. Krauss*); 6 km N. of Païta, 2 ♀, 25.i.1963 (*C. M. Yoshimoto*); Riviere Bleue, 35 km S.E. of Noumea, 160–180 m, 1 ♂, 14.xi.1963 (*R. Straatman*); Poindimie, 1 ♂, 11.ii.1963 (*N. L. H. Krauss*); in mts up Boulari R., 1 ♂, 3–4.xi.1958 (*C. R. Joyce*) (BPBM, Honolulu); 2 ♂, 2 ♀, same data as allotype (BMNH, London); 2 ♂, 2 ♀, same data as allotype (USNM, Washington); 2 ♂, 2 ♀, same data as allotype, in author's collection. LOYALTY IS.: Lifou, near We (Oue), 2–35 m, 10 ♂, 5 ♀, 26–28.iii.1968 (*T. C. Maa*) (BPBM, Honolulu).

BIOLOGY. Unknown.

REMARKS. This is a relatively large, robust species from New Caledonia and can be separated from all other species of that region by the size and from its nearest relative, *maai*, by the lack of the dentate ventral margin on the dorsal appendage of the aedeagus.

This species is named for Dr J. L. Gressitt, who collected much of the material described herein.

Tharra acusifera sp. n.

(Text-figs 349–353)

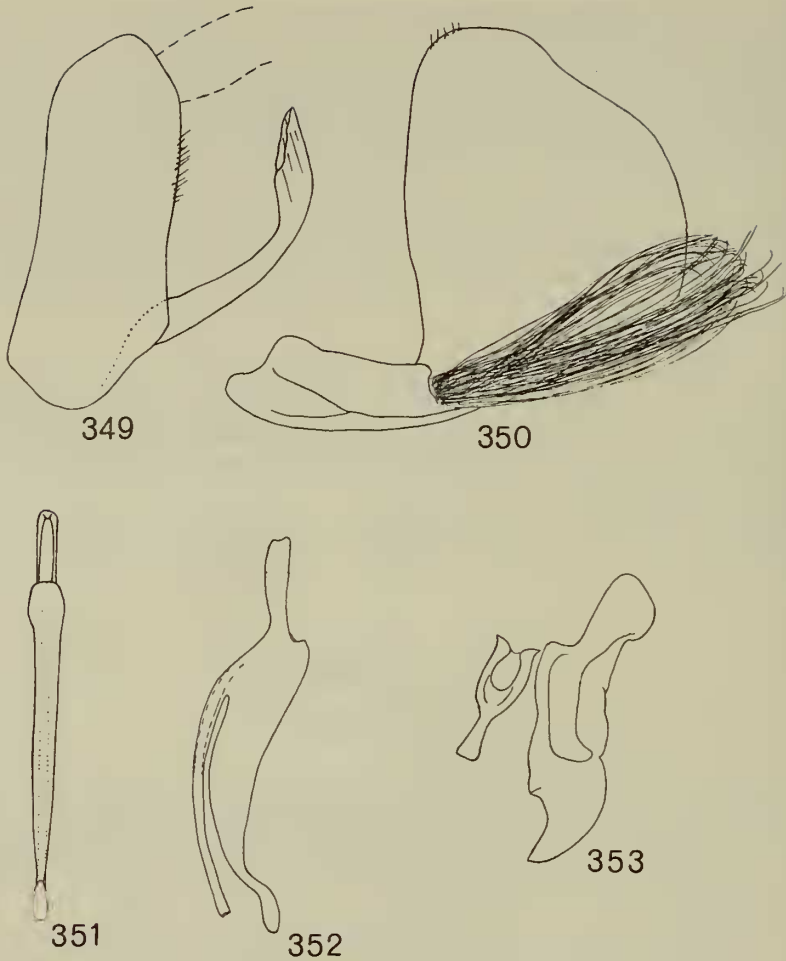
Length: ♂ 4.10–4.30 mm, ♀ 4.70–5.10 mm.

General colour dull ochraceous; sexual dimorphism apparent. Crown ochraceous; eyes light ochraceous to rufous; pronotum testaceous in ♂, light ochraceous in ♀ with a narrow fuscous band anteriorly; scutellum testaceous to fuscous; elytra dull ochraceous at basal two-thirds, fuscous at apical third in ♂, dull ochraceous throughout in ♀; clypeus and clypellus testaceous in ♂, light fuscous to ochraceous in ♀.

Head just slightly narrower than pronotum; crown short and broad, produced slightly beyond anterior margin of eyes, distal length about or less than one-fourth entire median length, striate radially, lateral margins converging basally, disk barely or slightly elevated above level of eyes; ocelli small, situated anteriorly; eyes large, somewhat globular, occupying about or nearly two-thirds of entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra subelongate, veins prominent, appendix distinctive but not well developed, venation as in description of genus; clypeus elongate, very broad anteriorly, narrowed posteriorly, slightly excised along lateral margin near antennal sockets, without median longitudinal carina, surface finely granulate, broadly rugulose along anterior margin; clypellus with lateral margins expanded apically.

Male pygofer in lateral aspect with long, distinctly curved process arising from caudoventral margin, process with lateral margins nearly parallel, slightly constricted medially and expanded apically, apical fourth distinctly aperturized along inner lateral margin, curved somewhat anteriodorsally at apical half; aedeagus in lateral aspect with dorsal appendage broad at basal three-fourths, constricted subapically, slightly expanded apically and curved caudodorsally; dorsal appendage without spines or flanges; ventral appendage long, narrow, tube-like, apex not reaching apex of dorsal appendage; gonopore apical; connective Y-shaped; style broadly and narrowly curved apically; plate with distal segment subquadrate.

Female seventh sternum with posterior margin nearly truncate.



FIGS 349-353. *Tharra acusifera* sp. n. 349, male pygofer, lateral view; 350, plate, lateral view; 351, aedeagus, dorsal view; 352, aedeagus, lateral view; 353, style and connective, dorsolateral view.

SPECIMENS EXAMINED.

Holotype ♂, LOYALTY IS.: Mare I., La Roche, iii. 1959 (*N. L. H. Krauss*) (BPBM, Honolulu).

Paratypes. LOYALTY IS.: allotype ♀, same data as holotype (BPBM, Honolulu); We, Lifou I., 1 ♀, 16-18.ii.1963 (*C. M. Yoshimoto*) (BPBM, Honolulu); Mare Island, La Roche, 1 ♀, iii. 1959 (*N. L. H. Krauss*), in author's collection. NEW CALEDONIA: Isle of Pines, 1 ♂, iii. 1959 (*N. L. H. Krauss*); above Plum, 1 ♂, 29.x.1958 (*C. R. Joyce*); Plaine-des-Lacs, 1 ♂, 2.ii.1963 (*C. M. Yoshimoto*); Mt Koghi, 450-600 m, 1 ♂, 4-6.x.1967 (*J. & M. Sedlacek*); Mt Mou, 1220 m, 1 ♀, 3.ii.1963 (*J. L. Gressitt*) (BPBM, Honolulu); Island of Mouac, N. of New Caledonia, 1 ♂, 19.x.1958 (*C. R. Joyce*), in author's collection.

BIOLOGY. Unknown. Data on the labels indicate that the species is prevalent from February to October.

REMARKS. This species is similar in male genital characteristics to *danae* but can be separated from that species by the very short, broad crown.

Tharra evansi sp. n.

(Text-figs 354-358)

Length: ♂ 4.30-4.40 mm, ♀ 5.10-5.30 mm.

General colour light fuscous. Crown ochraceous; eyes grey-fuscous; pronotum deep ochraceous; scutellum yellow with fuscous angles; elytra fuscous, apical third deep fuscous; clypeus and clypellus testaceous in ♂, rufofuscous in ♀.

Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, prominently depressed along middle, lateral margins nearly parallel, disk elevated above level of eyes; ocelli moderate size, situated anteriorly; eyes large, occupying about two-thirds entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins somewhat obscured, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, without median longitudinal carina, lateral margins somewhat incised at antennal sockets, surface finely granulose, broadly rugulose along anterior margin; clypellus with lateral margins broadly divergent apically.

Male pygofer in lateral aspect with long, curved process arising caudoventrally, process slightly curved, lateral margins broad basally, constricted along middle and somewhat bulbous subapically, aperturized subapically, sharply pointed apically; aedeagus in lateral aspect with dorsal appendage somewhat elongate, broad along basal three-fourths, constricted subapically, curved, slightly bulbous apically, without spines or flanges; ventral appendage very narrow, long, closely appressed to dorsal appendage, apex slightly expanded, reaching apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with distal appendage elongate, expanded medially along dorsal margin.

Female seventh sternum with posterior margin produced medially.

SPECIMENS EXAMINED.

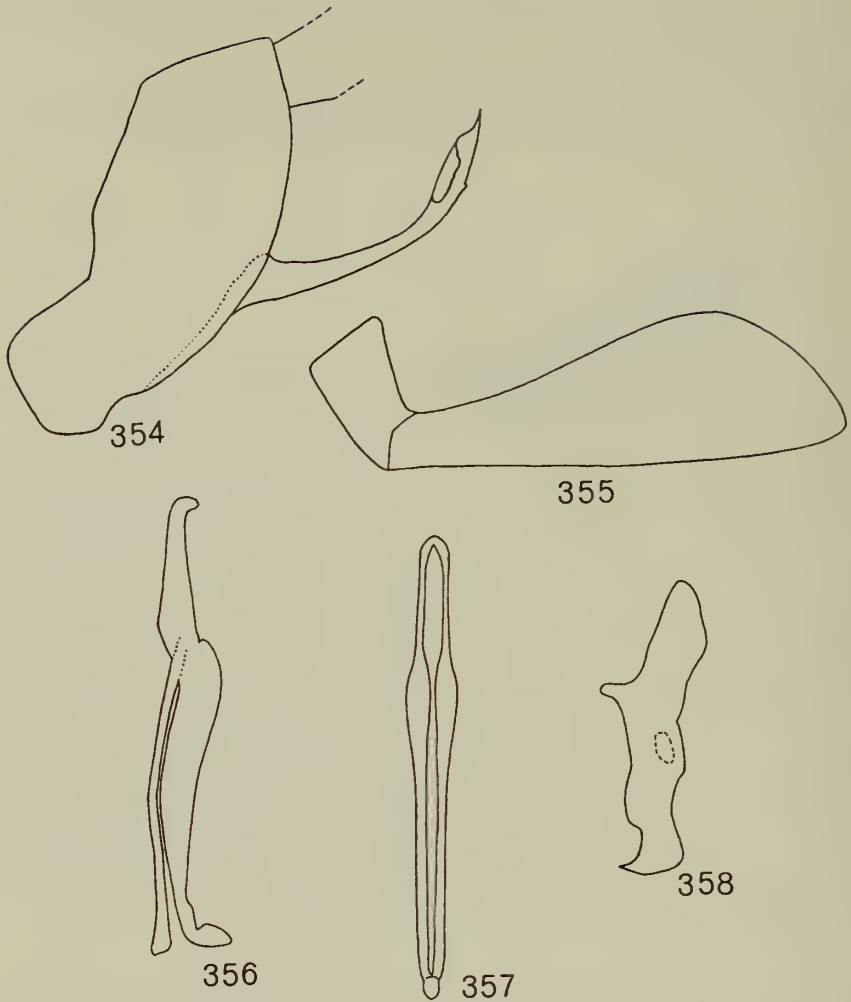
Holotype ♂. AUSTRALIA: Queensland, Hambledon, xi. 1921 (*Pemberton*) (BPBM, Honolulu).

Paratypes. AUSTRALIA: allotype ♀, same data as holotype (BPBM, Honolulu); 3 ♂, 3 ♀, same data as holotype; New Queensland, Kuranda, 200 m, 1 ♂, 14.iii.1956 (*J. L. Gressitt*); Babinda, 4 ♀, ix. 1919 (*F. Muir*) (BPBM, Honolulu); from a scrub, no further data, 1 ♂ (*Edmund Jarvis*) (USNM, Washington); Kuranda, 1 ♂, ii. 1904 (*F. P. Dodd*) (BMNH, London); 1 ♂, 1 ♀, same data as holotype, in author's collection.

BIOLOGY. Unknown.

REMARKS. *Tharra evansi* is among several species that occur only in Australia, and can be separated from them by the small, subbasal aperture on the pygofer process.

This species is named for Dr J. W. Evans, a renowned Homopterist from Australia.



FIGS 354-358. *Tharra evansi* sp. n. 354, male pygofer, lateral view; 355, plate, lateral view; 356, aedeagus, lateral view; 357, aedeagus, dorsal view; 358, style, lateral view.

***Tharra hebridensis* sp. n.**

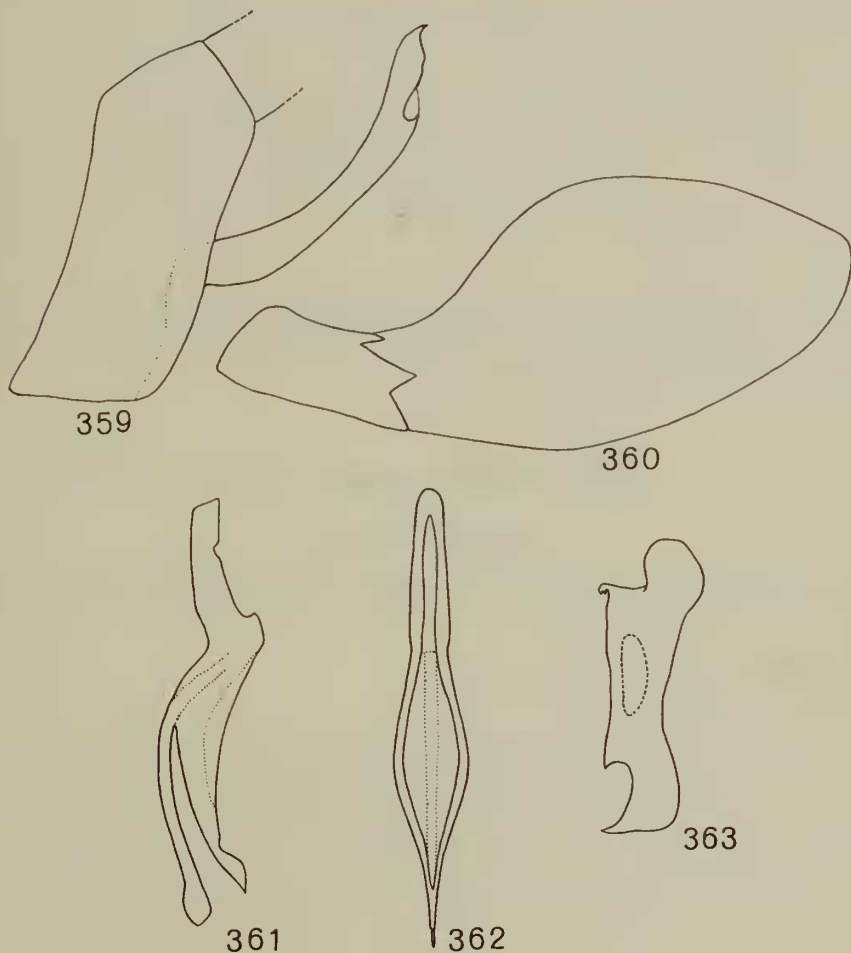
(Text-figs 359-363)

Length: ♂ 5.10-5.60 mm, ♀ 6.00-6.40 mm.

General colour deep fuscous to metallic fuscous in ♂, ochraceous with deep fuscous stripes on forewings in ♀; sexual dimorphism apparent. Crown ochraceous with a broad, longitudinal fuscous band medially in ♂, ochraceous with a small fuscous spot anteriorly in ♀; eyes griseous to deep fuscous in both sexes; pronotum deep fuscous in ♂, ochraceous with two medial, longitudinal fuscous stripes and fuscous lateral angles in ♀; scutellum deep metallic fuscous in ♂, ochraceous with two longitudinal fuscous stripes along middle with fuscous angles in ♀; elytra fuscous or metallic fuscous in ♂, ochraceous with fuscous stripes along commissural

line and medially from base of costa to apex of wings in ♀; clypeus deeply fuscous anteriorly, ochraceous posteriorly in both sexes; clypellus ochraceous in both sexes.

Head narrower than pronotum; crown long and narrow, produced beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, lateral margins nearly parallel or slightly converging basally, disk elevated above eyes; ocelli large, situated anteriorly; eyes large, occupying about two-thirds entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length exceeding median length of pronotum; elytra elongate, veins sometimes obscured, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, lateral margins excised medially near antennal sockets, without median longitudinal carina, surface finely granulose, broadly rugulose along anterior margin; clypellus with lateral margins expanded apically.



FIGS 359-363. *Tharva hebridensis* sp. n. 359, male pygofer, lateral view; 360, plate, lateral view; 361, aedeagus, lateral view; 362, aedeagus, dorsal view; 363, style, lateral view.

Male pygofer in lateral aspect with broad, curved, moderately long process arising from caudoventral margin, process with lateral margins nearly equidistant throughout with a small, subapical aperture on the outer lateral margin, apex with a small tooth; aedeagus in lateral aspect with dorsal appendage broad at basal half, becoming narrowly attenuated at apical half, slightly constricted subapically and curved dorsoposteriorly; dorsal appendage without spines or flanges, dorsal margins expanded in dorsal view; ventral appendage long, narrow, tube-like, somewhat swollen apically, slightly exceeding apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with distal segment elongate, dorsal margin expanded medially.

Female seventh sternum with posterior margin produced medially.

SPECIMENS EXAMINED.

Holotype ♂, NEW HEBRIDES: Santo, viii. 1929 (*L. E. Cheesman*) (BMNH, London).

Paratypes. NEW HEBRIDES: allotype ♀, same data as holotype (BMNH, London); 5 ♂, 2 ♀, same data as holotype; Banks I., Pakea, 1 ♂, 1 ♀, x. 1929 (*L. E. Cheesman*); Banks I., Vanua lava, 11 ♂, 1 ♀, x. 1929 (*L. E. Cheesman*); Malekula, 3 ♂, ii. 1930 (*L. E. Cheesman*) (BMNH, London); 1 ♂, same data as holotype; Espiritu Santo, Narango, 90 m, 1 ♀, vii. 1960 (*W. W. Brandt*) (BPBM, Honolulu); 1 ♂, 1 ♀, same data as holotype, in author's collection. BISMARCK ARCHIPELAGO: Lavongai, Banatam, 1 ♀, 22.iii.1962 (*Noona Dan Expedition '61-62*) (UZM, Copenhagen).

BIOLOGY. Unknown.

REMARKS. This species is similar in male genital characteristics to *metallica* but can be separated from that species by the unique colour patterns and sexual dimorphism between the sexes and the prevalence of the aperture on the subapical outer lateral margin of the pygofer process.

Tharra metallica (Osborn) **comb. n.**

(Text-figs 364-368)

Jassoidula metallica Osborn, 1934a : 185. Holotype ♀, TONGA (BMNH, London) [examined].

Jassoidula cuprescens Osborn, 1934a : 187. Holotype ♂, TONGA (BMNH, London) [examined].

Syn. n.

Jassoidula metallica Osborn; Metcalf, 1964 : 83.

Jassoidula cuprescens Osborn; Metcalf, 1964 : 83.

Length: ♂ 5.00 mm, ♀ 5.30 mm.

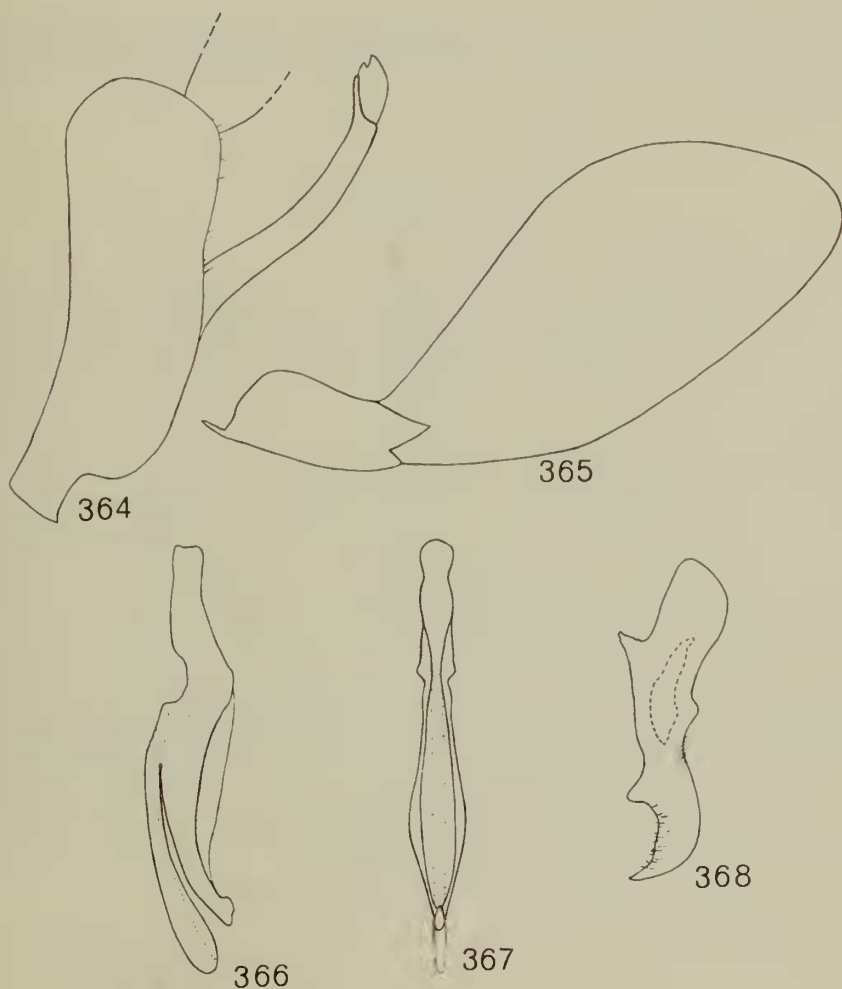
General colour fuscous; sexual dimorphism apparent. Crown deep fuscous with narrow longitudinal ochraceous line along middle in ♂; eyes deep fuscous; pronotum deep fuscous to ochraceous, particularly in ♀; scutellum deep fuscous anteriorly, ochraceous posteriorly; elytra light fuscous to deep fuscous with a broad ochraceous area covering clavus and other portions of the wing medially; clypeus and clypellus deep fuscous in ♂, ochraceous in ♀.

Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, lateral margins slightly converging basally, disk elevated above eyes; ocelli small, situated anterio-laterally; eyes large, occupying nearly two-thirds entire dorsal area of head; pronotum large, median length exceeding median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins somewhat obscured, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, without median longitudinal carina, surface finely

granulose at posterior half, distinctly rugulose at anterior half; clypellus with lateral margins expanded apically.

Male pygofer in lateral aspect with moderately broad, long, curved process arising from caudoventral margin, process with lateral margins equidistant throughout except apically, apex aperturized on outer lateral margin; aedeagus in lateral aspect with dorsal appendage broad at basal three-fourths, narrowed at apical fourth, slightly curved dorsally; dorsal appendage without spines or flanges, dorsal margins expanded laterally in dorsal view; ventral appendage long, narrow, expanded apically and extending considerably beyond apex of dorsal appendage; gonopore apical; connective Y-shaped; style broadly clawed apically; plate with distal segment elongate, dorsal margin somewhat expanded medially.

Female seventh sternum with posterior margin produced medially.



FIGS 364-368. *Tharra metallica* (Osborn). 364, male pygofer, lateral view; 365, plate, lateral view; 366, aedeagus, lateral view; 367, aedeagus, dorsal view; 368, style, lateral view.

DISTRIBUTION. Tonga Islands.

SPECIMENS EXAMINED.

Jassoidula metallica Osborn, holotype ♀, TONGA: Nukualofa, 16.ii.1925 (*P. A. Buxton & G. H. Hopkins*) (BMNH, London). *Jassoidula cuprescens* Osborn, holotype ♂, TONGA: Neiafu Bavau, 5.iii.1925 (*P. A. Buxton & G. H. Hopkins*) (BMNH, London).

TONGA: Bavau I., Holonga, 1 ♂, 1 ♀, 2.i.1956 (*N. Krauss*) (BPBM, Honolulu); Bavau I., Holonga, 1 ♂, 1 ♀, 2.i.1956 (*N. Krauss*), in author's collection.

BIOLOGY. Unknown.

REMARKS. This species is similar to *vitiensis* but can be separated from that species by the ventral appendage of the aedeagus which exceeds the apex of the dorsal appendage.

Tharra vitiensis sp. n.

(Text-figs 369-373)

Length: ♂ 5.00-5.30 mm, ♀ 5.70-6.00 mm.

General colour ochraceous with a broad, longitudinal fuscous band on forewings. Crown rufous; eyes griseous in ♂, deep fuscous in ♀; pronotum and scutellum ochraceous; elytra with clavus and costal area ochraceous, broad, longitudinal fuscous band between costal area and clavus in both sexes; clypeus rufous at anterior half, ochraceous at posterior half; clypellus ochraceous.

Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, lateral margins slightly convergent basally, disk elevated above level of eyes; ocelli small, situated anteriorly; eyes large, occupying about two-thirds entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, without median longitudinal carina, surface finely granulose, rugulose along anterior margin; clypellus with lateral margins slightly expanded distally.

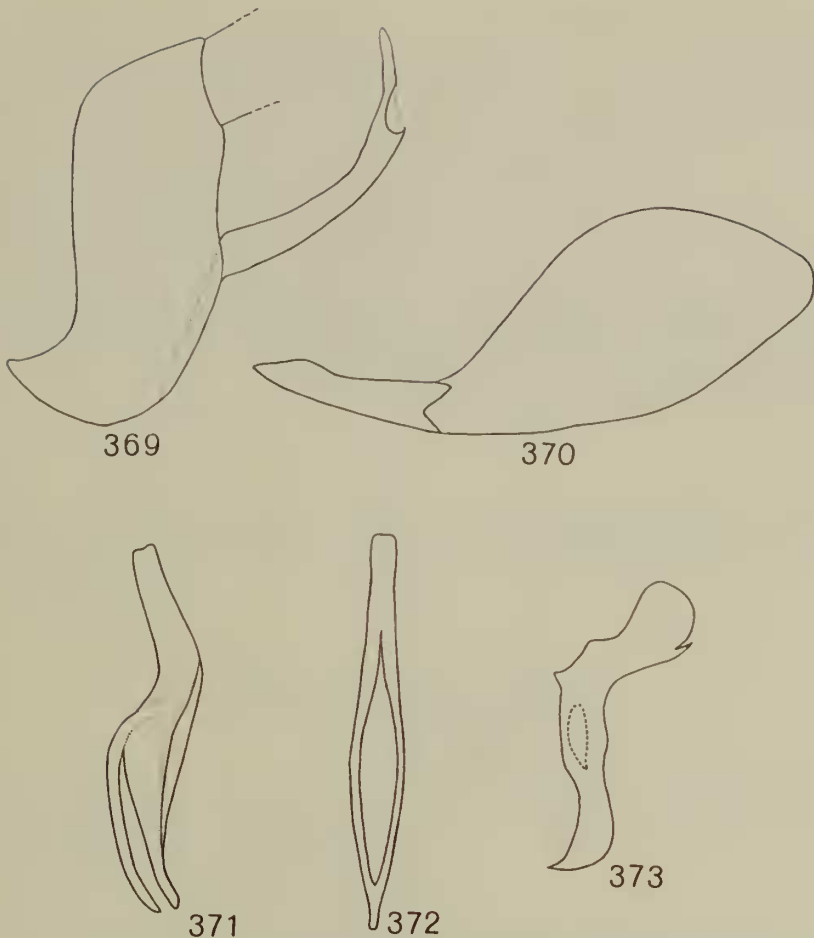
Male pygofer in lateral aspect with moderately broad process arising from caudoventral margin, process with lateral margins nearly equidistant throughout, slightly broader subapically than mesally, aperturized on outer subapical margin; aedeagus in lateral aspect with dorsal appendage broad at basal half, becoming narrowly attenuated at apical half, slightly curved dorsally; dorsal appendage without spines or flanges, dorsal margin expanded in dorsal view; ventral appendage long, narrow, slightly curved, reaching to or slightly beyond apex of dorsal appendage; gonopore apical; connective Y-shaped; style broadly hooked apically; plate with distal segment elongate, dorsal margin expanded medially.

Female seventh sternum with posterior margin produced medially.

SPECIMENS EXAMINED.

Holotype ♂, FIJI: Viti Levu, Lami, iv. 1951 (*N. L. H. Krauss*) (BPBM, Honolulu).

Paratypes. FIJI: allotype ♀, same data as holotype (BPBM, Honolulu); 55 ♂, 22 ♀, same data as holotype; Viti Levu, Tholo-l-suva, 3 ♂, i-iv.1951 (*N. L. H. Krauss*); Viti Levu, Nadarivatu, 1 ♂, 2 ♀, v. 1951 (*N. L. H. Krauss*); Rewa, 3 ♂, iv. 1906 (*F. Muir*) (BPBM, Honolulu); 2 ♂, same data as holotype (LTF, Turku);



FIGS 369-373. *Tharra vitiensis* sp. n. 369, male pygofer, lateral view; 370, plate, lateral view; 371, aedeagus, lateral view; 372, aedeagus, dorsal view; 373, style, lateral view.

1 ♂, 1 ♀, same data as holotype (BMNH, London); 1 ♂, 1 ♀, same data as holotype (USNM, Washington); 2 ♂, 2 ♀, same data as holotype, in author's collection.

BIOLOGY. Unknown.

REMARKS. *Tharra vitiensis* is similar in male genital characteristics to *metallica* (Osborn) but can be separated from that species by the ventral appendage of the aedeagus, the apex of which reaches the apex of the dorsal appendage, and by the aperturized pygofer process which is about one-third the length of the process.

***Tharra hades* Linnavuori**

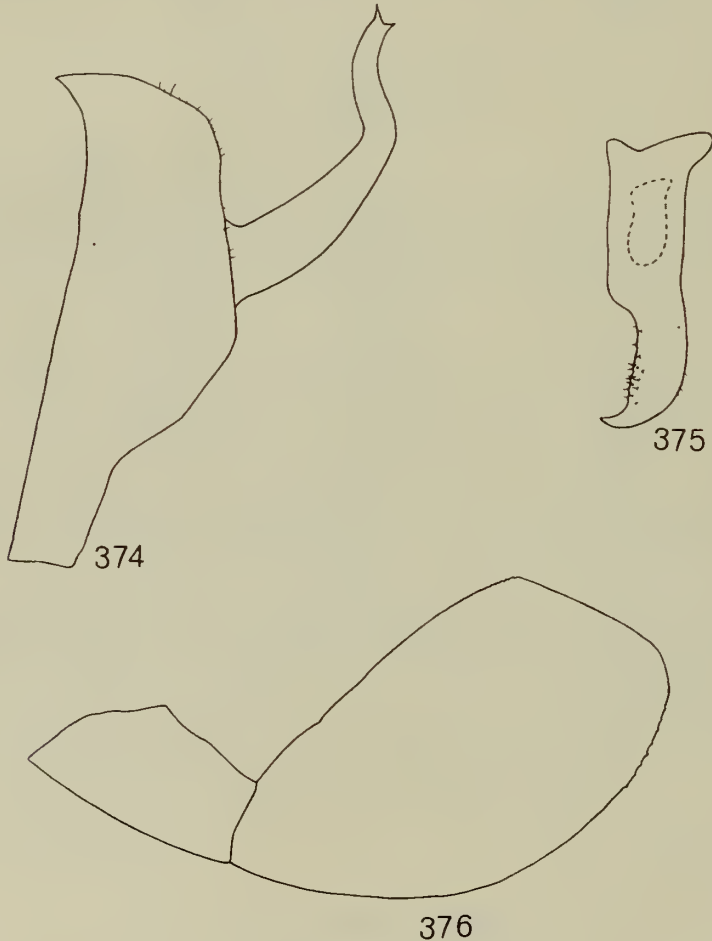
(Text-figs 374-376)

Tharra hades Linnavuori, 1960b : 26. Holotype ♂, FIJ1 (BPBM, Honolulu) [examined].

Length: ♂ 5.00 mm, ♀ 5.70 mm.

General colour deep fuscous to testaceous. Crown, pronotum and scutellum deep testaceous; elytra deep fuscous to testaceous; eyes deep griseous to rufofuscous; clypeus and clypellus deep fuscous to testaceous.

Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, slightly carinate medially, lateral margins slightly carinate and converging slightly basally, disk elevated above eyes; ocelli small, situated anteriorly; eyes large, somewhat elongate, occupying about two-thirds entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins somewhat obscured, appendix extremely well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, lateral margin somewhat constricted near antennal sockets, without median longitudinal carina, surface finely granulose, narrowly rugulose along anterior margin; clypellus with lateral margins broadly and narrowly concave, expanded distally.



FIGS 374-376. *Tharria hades* Linnavuori. 374, male pygofer, lateral view; 375, style, lateral view; 376, plate, lateral view.

Male pygofer in lateral aspect with broad, curved process arising from near middle of caudal margin, process with lateral margins somewhat broad at basal two-thirds and broadly sinuate at apical third with lateral margins becoming somewhat attenuated, apex with a pair of short projections (aedeagus and connective are not described because of missing parts and lack of material); style broadly clawed apically; plate with distal segment somewhat elongate, broad medially.

Female seventh sternum with posterior margin produced medially.

DISTRIBUTION. Fiji Islands.

SPECIMENS EXAMINED.

Tharra hades Linnavuori, holotype ♂, FIJI: Viti Levu, Mt Victoria, Tholo North, 13.ix.1938 (*Zimmerman*).

FIJI: Viti Levu, Nandarivatu, 3600 ft, 1 ♂, 5.ix.1938 (*E. C. Zimmerman*); Navai, Viti Levu, 1 ♀, ix. 1950 (*N. L. H. Krauss*).

BIOLOGY. Unknown.

REMARKS. From *kassiphone*, to which it is similar in general habitus, *hades* can be separated by the presence of the broadly sinuate pygofer process with its short apical projections.

Tharra kassiphone Kirkaldy

(Text-figs 377-381)

Tharra kassiphone Kirkaldy, 1907 : 72. Holotype ♂, FIJI (BPBM, Honolulu) [examined].

Tharra kassiphone var. a Kirkaldy, 1907 : 77.

Tharra kassiphone Kirkaldy; Linnavuori, 1960b : 28.

Tharra kassiphone Kirkaldy; Metcalf, 1964 : 24.

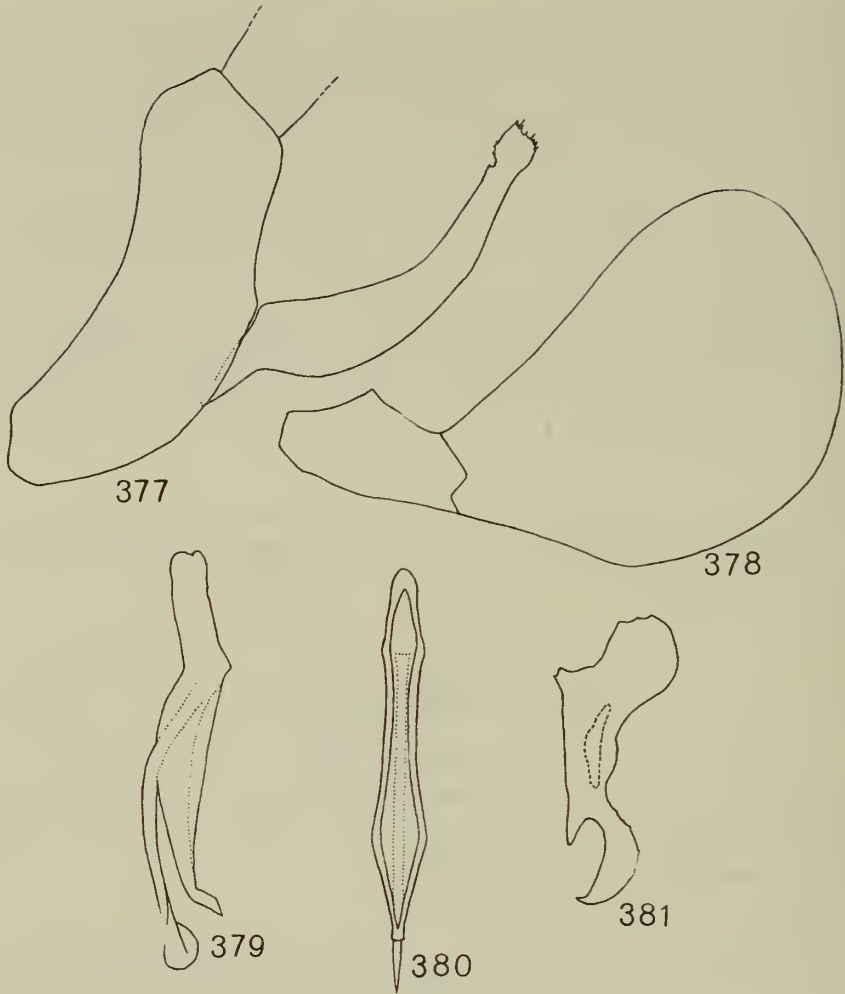
Tharra kassiphone var. a Kirkaldy; Metcalf, 1964 : 24.

Length: ♂ 4.10-4.40 mm, ♀ 4.90-5.40 mm.

General colour testaceous in both sexes. Crown testaceous; eyes light griseous to rufofuscos; pronotum and scutellum testaceous; elytra deep testaceous; clypeus deep testaceous in both sexes; clypellus deep testaceous in ♂, light ochraceous in ♀.

Head narrower than pronotum; crown long and very narrow, produced distally beyond anterior margin of eyes, distal length about one-fourth entire median length, striate radially, slightly depressed medially, lateral margins converging basally; ocelli small, situated anteriorly; eyes very large, somewhat globular, occupying over two-thirds entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins somewhat obscure, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, lateral margins slightly excavated medially near antennal sockets, without median longitudinal carina, surface finely granulose, rugulose along anterior margin; clypellus with lateral margins constricted medially, expanded apically.

Male pygofer in lateral aspect with very broad, curved process arising near caudoventral margin, process with lateral margins broad at basal half, somewhat narrowed at apical half, apex serrate or dentate along margin; aedeagus in lateral aspect with dorsal appendage broad at basal half, becoming narrowly attenuated subapically, apex abruptly curved dorsad; dorsal appendage without spines or flanges; ventral appendage very long, narrow, tube-like, apex broadly expanded and extending beyond apex of dorsal appendage; gonopore apical; connective



FIGS 377-381. *Tharra kassiphone* Kirkaldy. 377, male pygofer, lateral view; 378, plate, lateral view; 379, aedeagus, lateral view; 380, aedeagus, dorsal view; 381, style, lateral view.

Y-shaped; style characteristically clawed apically; plate with distal segment somewhat semiglobular.

DISTRIBUTION. Fiji Islands.

SPECIMENS EXAMINED.

Tharra kassiphone Kirkaldy, holotype ♂, FIJI: Viti Levu, Rewa, iii.1906 (Muir) (BPBM, Honolulu).

FIJI: Lami, Viti Levu, 3 ♀, iv. 1951 (N. L. H. Krauss); Rewa, 3 ♂, 4 ♀, iii.1906 (Muir);

Tamiavua, 1 ♀, 19.vii.1922 (*H. W. Simonson*); Lautoka, 1 ♂, 11.xii.1921 (*W. Greenwood*); Viti Levu, Colo-l-Suva, 1 ♂, 3-6.iii.1963 (*C. M. Yoshimoto*); Viti Levu, Nagali, 1 ♀, xi. 1957 (*N. L. H. Krauss*).

BIOLOGY. Unknown. Collection records indicate this species is prevalent from March to April.

REMARKS. This species is similar in general habitus to *nausikaa* but can be separated by the unique characters of the male genitalia, which include the dentate apex of the pygofer process and the very long, narrow ventral appendage of the aedeagus which is expanded distally.

Tharra ochracea (Osborn) comb. n.

(Text-figs 382-386)

Jassoidula ochracea Osborn, 1934a : 184. Holotype ♂, SAMOA (BMNH, London) [examined].

Length: ♂ 6.30-6.70 mm, ♀ 7.70-8.00 mm.

General colour light ochraceous in ♂, fuscous in ♀; sexual dimorphism apparent. Crown light ochraceous, suffused with light fuscous along middle; pronotum and scutellum light ochraceous, light fuscous in ♀; elytra very light ochraceous in ♂, fuscous in ♀; clypeus and clypellus ochraceous in both sexes.

Head narrower than pronotum; crown long, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, lateral margins nearly parallel, disk elevated above eyes; ocelli small, situated anteriorly; eyes moderate size, occupying nearly two-thirds entire dorsal area of head; pronotum long, median length greater than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins somewhat obscured, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, somewhat excised along middle near antennal sockets, without median longitudinal carina, surface finely granulate, rugulose along anterior margin; clypellus with lateral margins nearly parallel.

Male pygofer in lateral aspect with long, slender, curved process arising from caudoventral margin, process with lateral margins broad basally, becoming narrowly attenuated and very slender throughout, apex aperturized; aedeagus in lateral aspect with dorsal appendage broad at basal three-fourths, narrowed at apical fourth, curved slightly dorsad; dorsal appendage without spines or flanges, dorsal margin expanded laterally in dorsal view; ventral appendage very long, broad, tube-like, apex extending considerably beyond apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with distal segment elongate, dorsal margin expanded along middle.

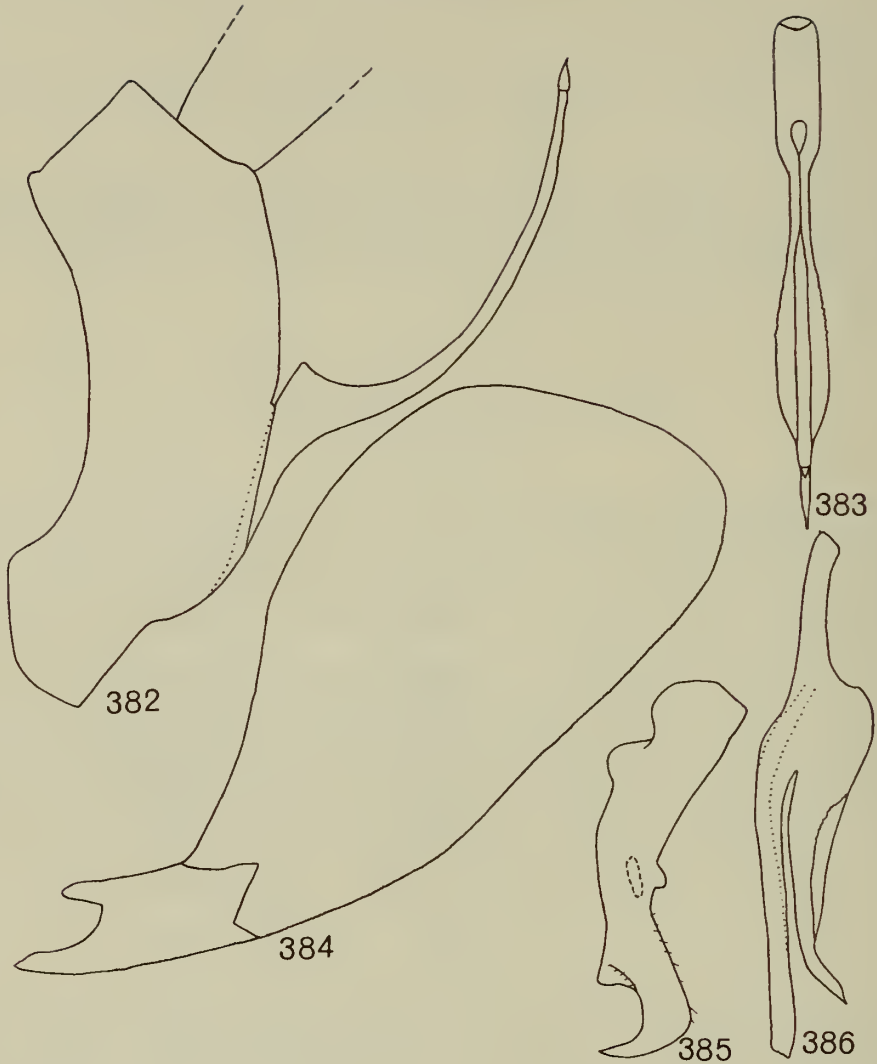
Female seventh sternum with posterior margin produced medially.

DISTRIBUTION. Samoa Islands.

SPECIMENS EXAMINED.

Jassoidula ochracea Osborn, holotype ♂, SAMOA: Upolu Island, Malololelei, 2000 ft, xii.1925 (*P. A. Buxton & G. H. Hopkins*) (BMNH, London).

SAMOA: Savaii, Papua, 2 ♂, 1 ♀, ii.1955 (*N. L. H. Krauss*); Afiamalu, Upolu, 2200 ft, 2 ♂, 1 ♀, 10.vii.1940 (*E. C. Zimmerman*).



FIGS 382-386. *Tharra ochracea* (Osborn). 382, male pygofer, lateral view; 383, aedeagus, dorsal view; 384, plate, lateral view; 385, style, lateral view; 386, aedeagus, lateral view.

BIOLOGY. Unknown.

REMARKS. From *tahitiensis*, to which it is similar in general habitus and male genital characteristics, *ochracea* can be separated by the presence of the small aperture at the extreme apex of the pygofer process, the dorsal margin of the dorsal appendage which is expanded laterally and the ventral appendage which extends beyond the apex of the dorsal appendage in the lateral view.

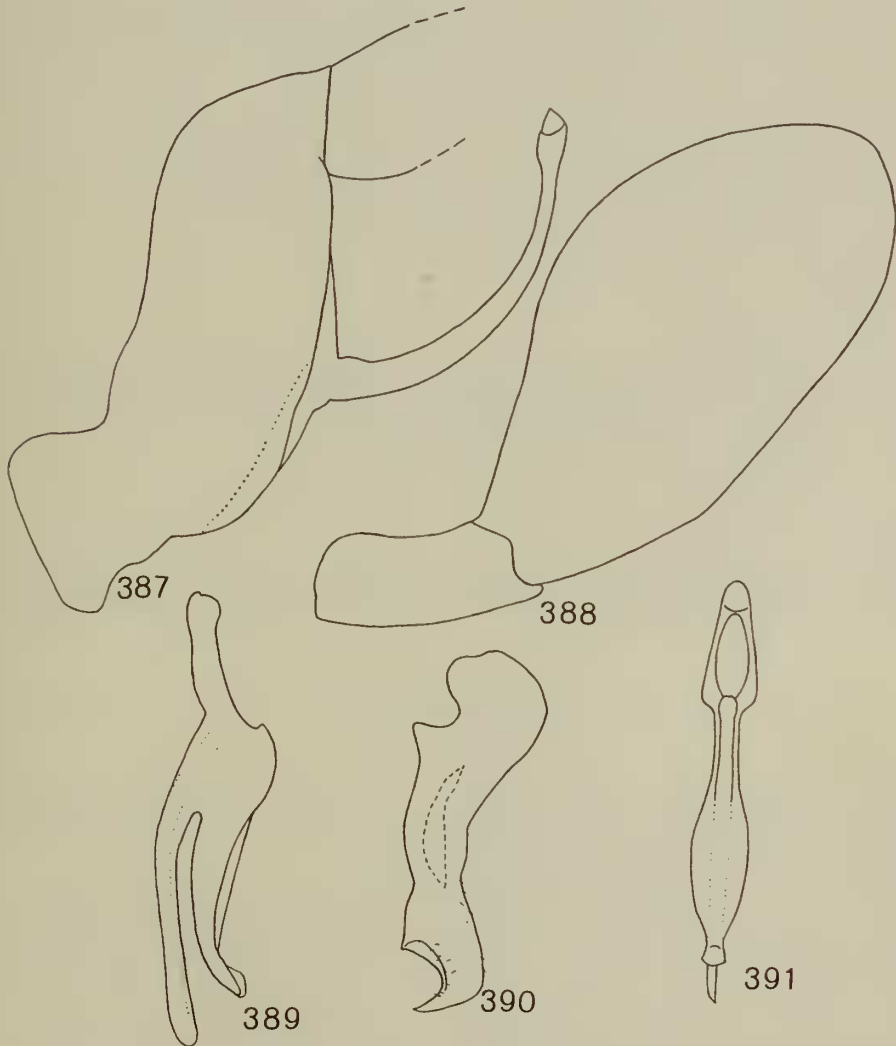
Tharra limbata (Osborn) **comb. n.**

(Text-figs 387-391)

Jassoidula limbata Osborn, 1934a : 186. Holotype ♀, SAMOA (BMNH, London) [examined].*Jassoidula limbata* Osborn; Metcalf, 1964 : 83.

Length: ♂ 6.30 mm, ♀ 6.70 mm.

General colour fuscous. Crown fuscous at apical third, ochraceous at basal two-thirds; eyes deep fuscous; crown and scutellum light fuscous; elytra deep fuscous with a narrow



FIGS 387-391. *Tharra limbata* (Osborn). 387, male pygofer, lateral view; 388, plate, lateral view; 389, aedeagus, lateral view; 390, style, lateral view; 391, aedeagus, dorsal view.

ochraceous band along clavus and costal area; clypeus deep fuscous at anterior half, ochraceous at posterior half; clypellus ochraceous.

Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, slightly depressed medially, lateral margins slightly convex, disk elevated above level of eyes; ocelli moderate size, situated anteriorly; eyes moderate size, occupying nearly two-thirds entire dorsal area of head; pronotum large, median length slightly greater than median length of crown, surface finely knobbed; scutellum moderate size, median length about equal to median length of pronotum; elytra elongate, veins distinct, appendix well developed, venation as in description of genus; clypeus elongate, very broad anteriorly, narrowed posteriorly, lateral margins excised near antennal sockets, without median longitudinal carina, surface finely granulose, narrowly rugulose along anterior margin; clypellus with lateral margins constricted medially.

Male pygofer in lateral aspect with long, curved slender process arising from caudoventral margin, process with lateral margins nearly equidistant throughout, slightly enlarged apically, apex aperturized or appearing segmented; aedeagus in lateral aspect with dorsal appendage broad at basal three-fourths, attenuated at apical fourth, dorsal appendage without spines or flanges, dorsal margins expanded in dorsal view; ventral appendage long, tube-like, extending beyond apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with distal segment elongate, dorsal margin expanded medially.

Female seventh sternum with posterior margin produced medially.

DISTRIBUTION. Samoa Islands.

SPECIMENS EXAMINED.

Jassoidula limbata Osborn, holotype ♀, SAMOA: Malololelei, Upolu, 2000 ft (*P. A. Buxton & G. H. Hopkins*) (BMNH, London); allotype ♂, SAMOA: Savaii, Salailua, v. 1923-1924 (*Bryan*) (BPBM, Honolulu).

SAMOA: Afiamalu, Upolu, 1 ♂, 2 ♀, beating shrubbery, 13-27.vi-4.viii.1940 (*E. C. Zimmerman*).

BIOLOGY. Unknown.

REMARKS. From *ochracea*, to which it is similar in male genital characteristics, *limbata* can be distinguished by the enlarged apex of the pygofer process and smaller size.

Tharra lenta sp. n.

(Text-figs 392-396)

Length: ♂ 4.60-4.90 mm, ♀ 5.40-5.70 mm.

General colour ochraceous. Crown ochraceous; eyes deep fuscous; pronotum and scutellum light fuscous to ochraceous; elytra deep ochraceous with a narrow, uneven deep fuscous band subapically on elytra; clypeus and clypellus ochraceous.

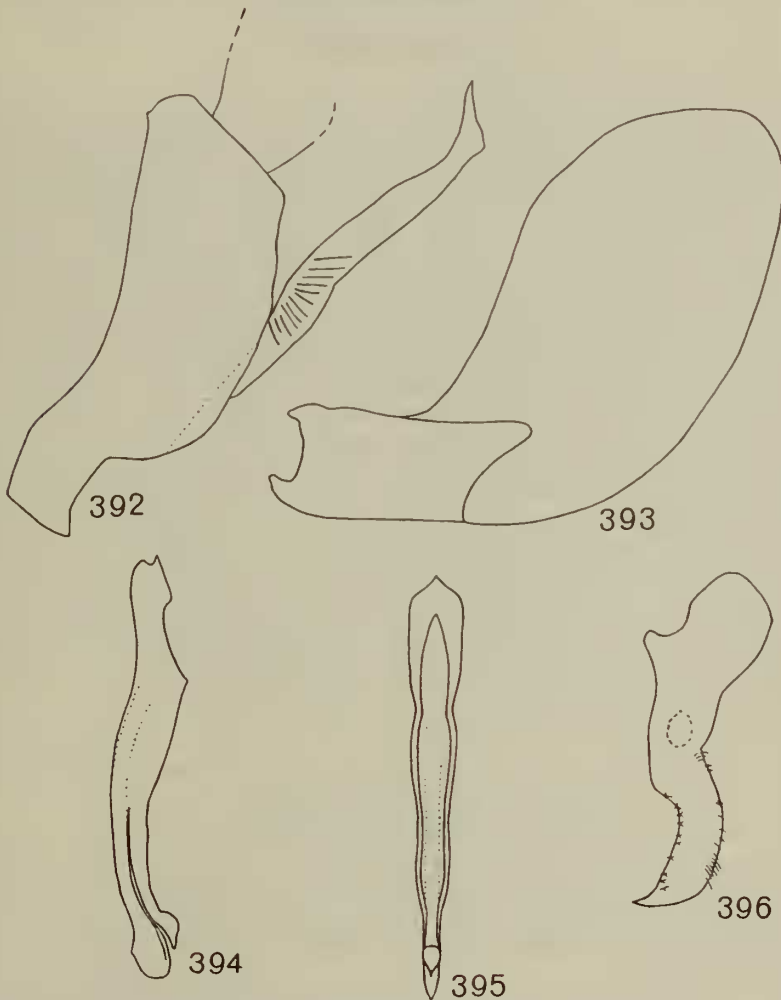
Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, lateral margins slightly convergent basally, disk elevated above level of eyes; ocelli small, situated anteriorly; eyes moderate size, somewhat elongate, occupying a little over half of entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins somewhat obscured, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, deeply excised medially near antennal sockets, without median longitudinal carina, surface finely granulose, narrowly rugulose along anterior margin; clypellus with lateral margins expanded distally.

Male pygofer in lateral aspect with long, somewhat broad process arising from caudoventral margin, process with lateral margins nearly parallel, constricted subapically, with a short, broad, subapical projection on outer margin, sharply and shortly attenuated apically, and with oblique striations subbasally; aedeagus in lateral aspect with dorsal appendage narrowed throughout and nearly tube-like, without spines or flanges; ventral appendage tube-like, greatly expanded apically, exceeding apex of dorsal appendage; gonopore terminal; connective Y-shaped; style broadly clawed apically; plate with distal segment somewhat elongate, curved caudodorsally.

Female seventh sternum with posterior margin produced medially.

SPECIMENS EXAMINED.

Holotype ♂, FIJI: Labasa, vii. 1922 (*R. Veitch*) (BPBM, Honolulu).



FIGS 392-396. *Tharva lenta* sp. n. 392, male pygofer, lateral view; 393, plate, lateral view; 394, aedeagus, lateral view; 395, aedeagus, dorsal view; 396, style, lateral view.

Paratypes. FIJI: allotype ♀, same data as holotype (BPBM, Honolulu); Labasa, 3 ♂, 2 ♀, xii.1921 (*R. Veitch*) (BPBM, Honolulu); 4 ♂, same data as holotype, in author's collection.

BIOLOGY. Unknown.

REMARKS. This species is similar to *testacea* in general habitus, but can be separated from it by the distinctive pygofer process and the male plate on which the distal segment is curved caudodorsally.

Tharra transversa sp. n.

(Text-figs 397-401)

Length: ♂ 5.30-5.90 mm, ♀ 6.10-6.70 mm.

General colour ochraceous; sexual dimorphism apparent. Crown light to deep ochraceous; eyes light to deep fuscous; pronotum ochraceous; scutellum ochraceous with deep fuscous markings, especially in ♀; elytra ochraceous throughout in ♂ except for narrow, uneven fuscous band subapically, deep, broad, fuscous vittae in ♀; clypeus and clypellus ochraceous.

Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, slightly depressed medially, lateral margins converging basally; ocelli medium size, situated anteriorly; eyes moderate size, somewhat elongate, occupying a little over half of entire dorsal area of head; pronotum large, median length about equal to median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus elongate, very broad anteriorly, narrowed posteriorly, lateral margins somewhat excised near antennal sockets, without median longitudinal carina, surface finely granulose, narrowly rugulose along anterior margin; clypellus with lateral margins expanded apically.

Male pygofer in lateral aspect with broad, curved process arising from caudoventral margin, process very broad basally, becoming somewhat attenuated throughout, sharply pointed apically with transverse striations medially; aedeagus in lateral aspect with dorsal appendage somewhat narrowed throughout, slightly constricted subapically and expanded apically, without spines or flanges; ventral appendage somewhat short, tube-like, expanded slightly apically and extending slightly beyond apex of dorsal appendage; gonopore apical; connective Y-shaped; style broadly hooked; plate with distal segment somewhat elongate, curved caudodorsally.

Female seventh sternum with posterior margin produced medially.

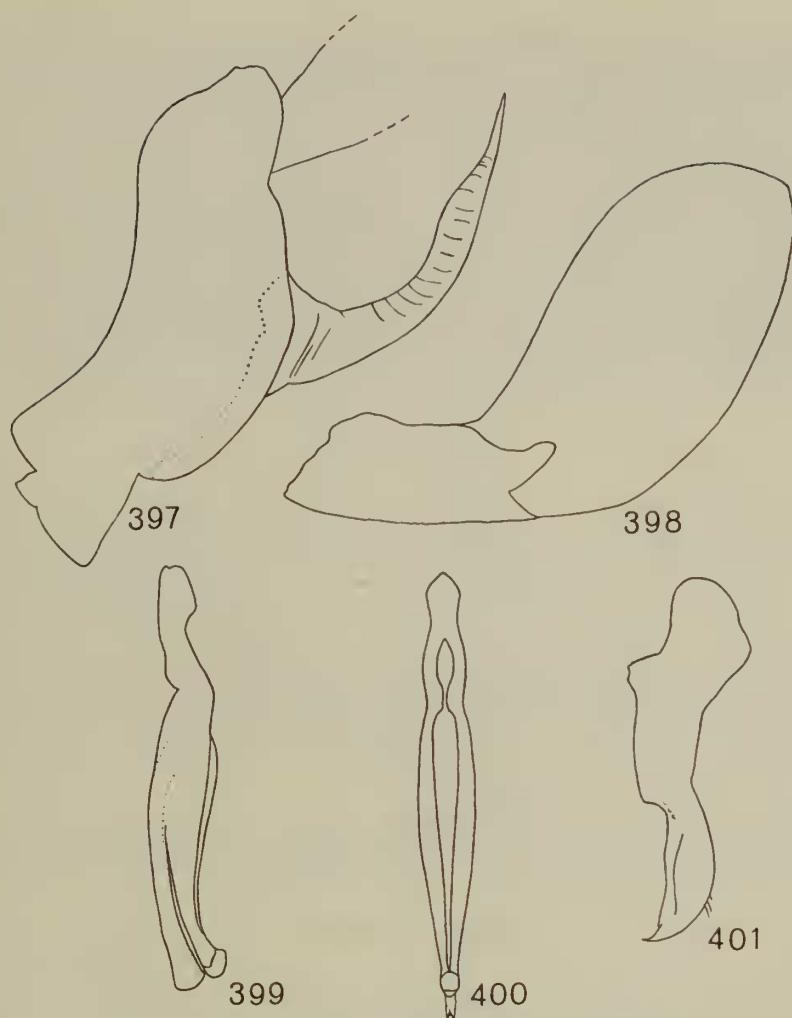
SPECIMENS EXAMINED.

Holotype ♂, FIJI: Viti Levu, Suva, v.1951 (*N. L. H. Krauss*) (BPBM, Honolulu).

Paratypes. FIJI: allotype ♀, Lami, Viti Levu, iii.1951 (*N. L. H. Krauss*) (BPBM, Honolulu); 9 ♂, 17 ♀, same data as allotype (BPBM, Honolulu); 1 ♂, 1 ♀, same data as allotype (BMNH, London); 1 ♂, 1 ♀, same data as allotype (LTF, Turku); 2 ♂, 2 ♀, same data as allotype, in author's collection.

BIOLOGY. Unknown. Collection records indicate that this species is prevalent from February to April.

REMARKS. This species is similar to *nausikaa* in male genital characteristics, but can be separated from that species by the larger size and the shorter and broader crown.



FIGS 397-401. *Tharra transversa* sp. n. 397, male pygofer, lateral view; 398, plate, lateral view; 399, aedeagus, lateral view; 400, aedeagus, dorsal view; 401, style, lateral view.

Tharra nausikaa Kirkaldy

(Text-figs 402-407)

Tharra nausikaa Kirkaldy, 1907 : 77. Holotype ♂, FIJI (BPBM, Honolulu) [examined].

Tharra nausikaa var. *pallidor* Kirkaldy, 1907 : 78. Holotype ♀, FIJI (BPBM, Honolulu) [examined]. **Syn. n.**

Tharra nausikaa Kirkaldy; Linnavuori, 1960b : 29.

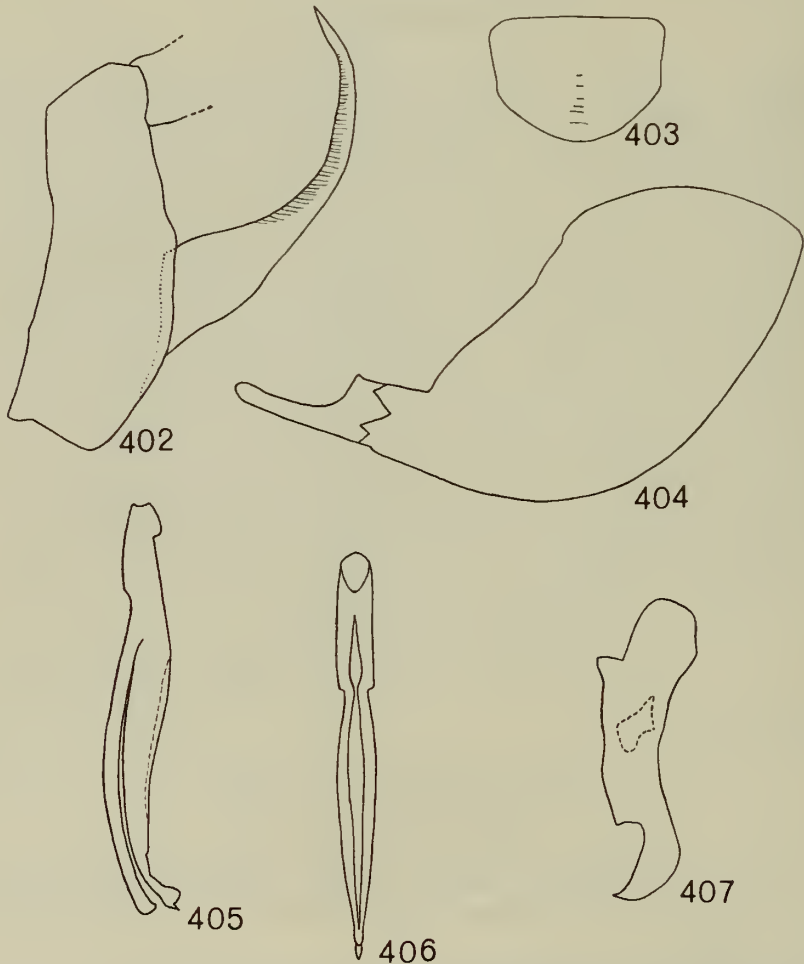
Tharra nausikaa subsp. *pallidor* Linnavuori, 1960b : 30.

Tharra nausikaa Kirkaldy; Metcalf, 1964 : 25.

Length: ♂ 4.30-4.90 mm, ♀ 5.30-5.90 mm.

General colour deep fuscous to deep testaceous in both sexes; sexual dimorphism apparent. Crown testaceous with a median ochraceous longitudinal line along middle in ♂, deep ochraceous with a pair of longitudinal fuscous or testaceous lines separated by an ochraceous band along middle in ♀, pronotum deep testaceous in ♂, deep ochraceous with a pair of longitudinal deep testaceous bands in ♀; scutellum deep testaceous in ♂, deep ochraceous in ♀ with two testaceous longitudinal bands on either side of middle; elytra deep fuscous to deep testaceous in ♂ with small ochraceous spots along the costal margin subapically; veins obscure in ♂, deep ochraceous to deep fuscous in ♀ with venation distinct and deep ochraceous bands subapically; clypeus deep ochraceous to yellow ochraceous with a broad anterior fuscous band in both sexes and with posterior half deep testaceous in ♀; clypellus deep testaceous in both sexes.

Head narrower than pronotum; crown elongate, produced beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, lateral margins slightly converging basally, disk elevated above eyes; ocelli small, situated anteriorly; eyes large,



FIGS 402-407. *Tharva nausikaa* Kirkaldy. 402, male pygofer, lateral view; 403, female seventh sternum, ventral view; 404, plate, lateral view; 405, aedeagus, lateral view; 406, aedeagus, dorsal view; 407, style, lateral view.

somewhat elongate, occupying about two-thirds entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, venation as in description of genus, veins prominent in ♀, obscure in ♂, appendix well developed; clypeus elongate, very broad anteriorly, narrowed posteriorly, without median longitudinal carina, surface finely granulose, narrowly rugulose along anterior margin; clypellus with lateral margins expanded distally.

Male pygofer in lateral aspect with a broad, curved process arising from caudodorsal margin, process very broad basally, becoming curved and narrowly attenuated apically, with numerous striations along inner lateral margin, striations transverse; aedeagus in lateral aspect with dorsal appendage elongate, narrowed throughout, constricted subapically, apex slightly swollen and curved dorsally, without spines or flanges; ventral appendage extremely long, very narrow, tube-like, apex reaching apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with distal segment somewhat elongate and curved caudodorsally.

Female seventh sternum with posterior margin produced medially.

DISTRIBUTION. Fiji Islands, New Hebrides.

SPECIMENS EXAMINED.

Tharra nausikaa Kirkaldy, holotype ♂, FIJI: Viti Levu, Rewa, ii.1906 (*Muir*) (BPBM, Honolulu). *Tharra nausikaa pallidor* Kirkaldy, holotype ♀, Navua, ii.1906 (*Muir*) (BPBM, Honolulu).

FIJI: Lami, Viti Levu, 59 ♂, 62 ♀, iii-v.1951 (*N. L. H. Krauss*); Viti Levu, Tholo-l-suva, 3 ♂, iv. 1950 (*N. L. H. Krauss*); Viti Levu, Nandarivatu, 5 ♂, 7 ♀, v.1951 (*N. L. H. Krauss*); Viti Levu, Colo-l-suva, 2 ♂, 3-6.iii.1963 (*C. M. Yoshimoto*); Ovalua, Thawthi, 2 ♀, 12.vii.1938 (*E. C. Zimmerman*). NEW HEBRIDES: Aneityum, 3 ♂, ix.-xi.1930 (*L. E. Cheesman*); Tanna, 1 ♀, ix. 1930 (*L. E. Cheesman*).

The examination of the holotype ♀ of *pallidor* and numerous other specimens of the same sex showed sexual dimorphism, thus I have synonymized the name under *nausikaa*.

BIOLOGY. Unknown. Collection records indicate that the species is prevalent from March through May.

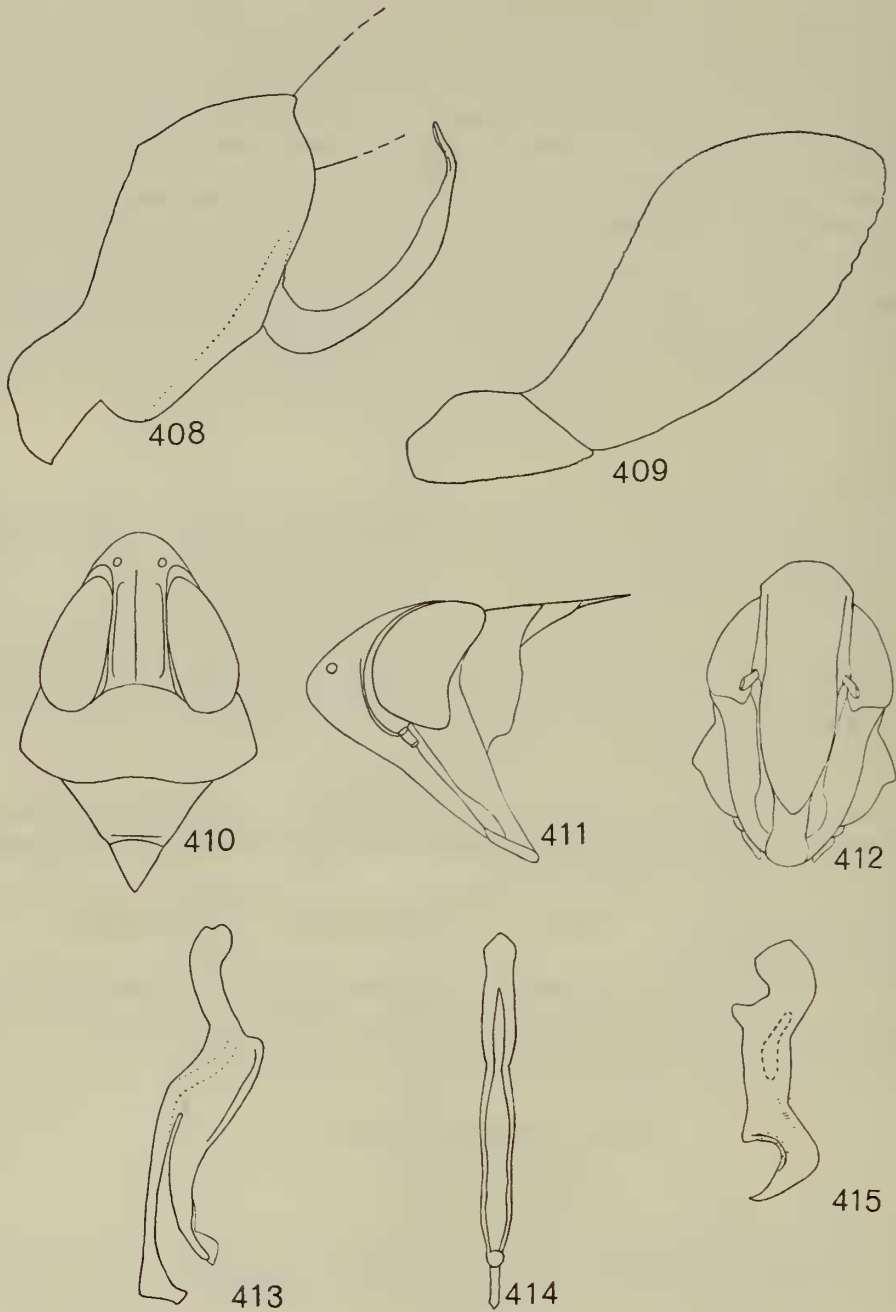
REMARKS. This species is similar to *kassiphone* Kirkaldy in general habitus and can be separated from that species by the presence of the broadly curved pygofer process with the striations along the inner lateral margin.

Tharra subquadrata sp. n.

(Text-figs 408-415)

Length: ♂ 5.10-5.30 mm, ♀ 5.40-5.90 mm.

General colour ochraceous with deep fuscous markings on crown, pronotum and elytra. Crown ochraceous with a large spot along middle of anterior margin and two smaller spots on each side of middle between eyes; eyes deep ochraceous to deep fuscous; pronotum ochraceous with deep fuscous markings along anterior border; scutellum light ochraceous; elytra fuscous except for wide, pale ochraceous band along costal area and commissural line, with veins pale ochraceous to deep ochraceous along area dorsad of costa; clypeus ochraceous except for large, deep fuscous band or spot along the apical third; clypellus ochraceous in ♂, apical half fuscous in ♀.



FIGS 408-415. *Tharra subquadrata* sp. n. 408, male pygofer, lateral view; 409, plate, lateral view; 410, head, pronotum and scutellum, dorsal view; 411, head, pronotum and scutellum, lateral view; 412, face; 413, aedeagus, lateral view; 414, aedeagus, dorsal view; 415, style, lateral view.

Head distinctly narrower than pronotum; crown distinctly produced beyond anterior margin of eyes, distal length over one-third entire median length, striate radially, deeply depressed along middle, lateral margins carinate, slightly concave, disk elevated above level of eyes; ocelli small, situated anteriorly; eyes moderate size, occupying about one-third entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed, anterior margin somewhat concave; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, somewhat narrowed posteriorly, lateral margins deeply excavated along middle near antennal sockets, without median longitudinal carina, surface finely granulose, broadly rugulose along anterior margin; clypellus with lateral margins expanded apically.

Male pygofer in lateral aspect with long, curved process arising from near middle of caudal margin, process with lateral margins nearly equidistant throughout, constricted subapically to a narrow, finger-like lobe; aedeagus in lateral aspect with dorsal appendage broad at basal half, becoming narrowly attenuated at apical half and slightly curved dorsally, apex slightly expanded, without spines or flanges; ventral appendage very long, narrow, at basal three-fourths becoming expanded apically to subquadrate shape and extending considerably beyond apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with distal segment elongate, nearly twice as long as wide, with dorsal margin slightly expanded.

Female seventh sternum with posterior margin considerably produced medially.

SPECIMENS EXAMINED.

Holotype ♂, SOLOMON Is.: Florida Islands, Ngglea, Haleta, 0-50 m, 17.x.1964 (*R. Straatman*) (BPBM, Honolulu).

Paratypes. SOLOMON Is.: allotype ♀, San Cristobal, Bweinaniawarikiapu, 12.viii.1960 (*C. W. O'Brien*) (BPBM, Honolulu); Guadalcanal, Tathimani, 1 ♂, 14.v.1960 (*C. W. O'Brien*); Santa Ysabel, Kolotuve, 1 ♂, 21.vi.1960 (*C. W. O'Brien*); Santa Ysabel, Tatamba, 3 ♀, 11-13.vi.1960 (*C. W. O'Brien*) (BPBM, Honolulu); Russell Island, Samata, 1 ♂, 1 ♀, 15.ix.1934 (*R. A. Lever*); Guadalcanal Island, Ruavatu, 1 ♂, 2.v.1934 (*R. A. Lever*); Ysabel Island, Tatamba, 7.vii.1935 (*R. E. Lever*) (BMNH, London); Santa Ysabel, Kologajoga, 1 ♂, 23.vi.1960 (*C. W. O'Brien*); Santa Ysabel, Tatamba, 1 ♀, 13.vi.1960 (*C. W. O'Brien*), in author's collection.

BIOLOGY. Unknown.

REMARKS. This species has unique characters of the head and of the pronotum, which are similar to other long-headed species of *Tharra*, but can be separated from them by the unique subquadrate apex of the ventral appendage of the aedeagus.

Tharra constricta sp. n.

(Text-figs 416-420)

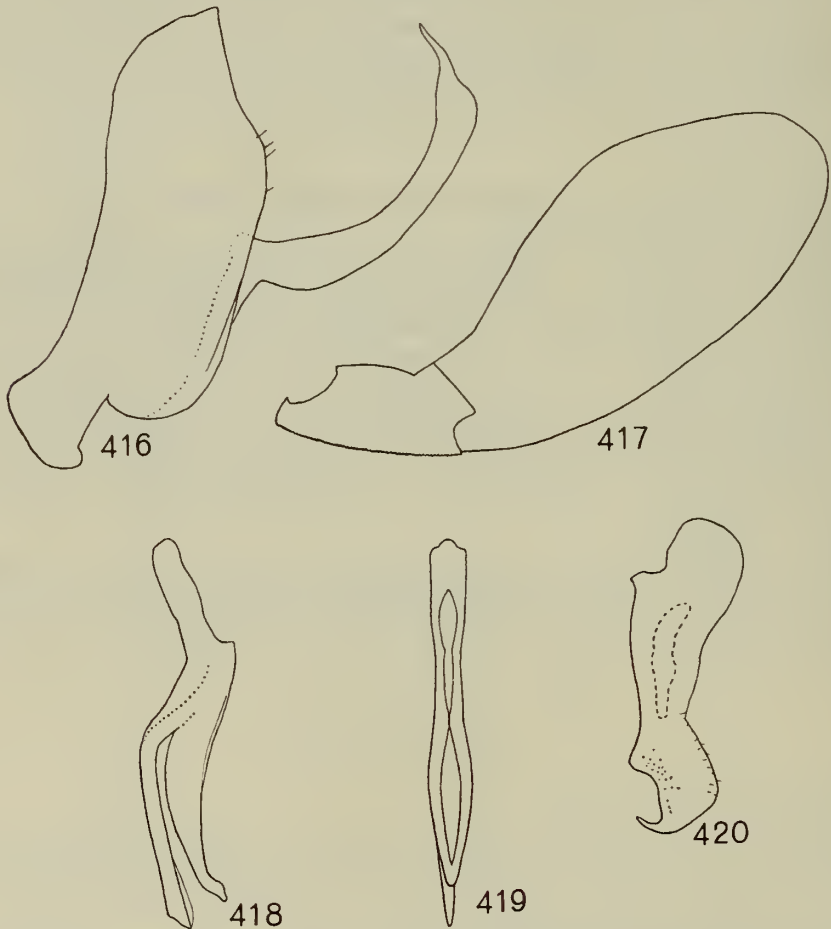
Length: ♂ 5.40-5.90 mm, ♀ unknown.

General colour fuscous. Crown fuscous with ochraceous along lateral margins and middle; eyes rufofuscous; pronotum light rufofuscous; scutellum deep fuscous to testaceous anteriorly, ochraceous posteriorly; elytra fuscous with ochraceous area terminating at commissural line and with an ochraceous band subapically; clypeus ochraceous with an incomplete fuscous transverse band subapically; clypellus ochraceous.

Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, slightly depressed medially, lateral margins slightly carinate, converging basally, disk elevated

considerably above level of eyes; ocelli small, situated anteriorly; eyes moderate size, subglobular, occupying slightly over two-thirds entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins distinctive, appendix well developed, venation as in description of genus; clypeus elongate, slightly broader anteriorly than posteriorly, lateral margins excised medially near antennal sockets, without median longitudinal carina, surface finely granulose at basal two-thirds, distinctively rugulose along apical third; clypellus with lateral margins broadly expanded apically.

Male pygofer in lateral aspect with long, very strongly curved process arising from caudoventral margin, process with lateral margins nearly equidistant throughout, except for apical fourth, outer lateral margins slightly expanded subapically, becoming attenuated or finger-like apically and projecting almost dorso-anteriorly; aedeagus in lateral aspect with dorsal appendage broad at basal three-fourths, becoming narrowly attenuated subapically and slightly curved caudodorsally at apex, without spines or flanges; ventral appendage long, narrow, tube-like,



FIGS 416-420. *Tharra constricta* sp. n. 416, male pygofer, lateral view; 417, plate, lateral view; 418, aedeagus, lateral view; 419, aedeagus, dorsal view; 420, style, lateral view.

apex somewhat expanded and extending somewhat beyond apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with distal segment elongate, nearly twice as long as wide, narrowed, slightly expanded along dorsal margin.

SPECIMENS EXAMINED.

Holotype ♂, SOLOMON IS.: Bougainville (S.), Kokura, 690 m, 10.vi.1956 (*E. J. Ford, Jr*) (BPBM, Honolulu).

Paratypes. NEW GUINEA: Purosa, 20–25 km S.E. Okapa 1800–2020 m, 1 ♂, 28.viii.1964 (*J. & M. Sedlacek*) (BPBM, Honolulu). SOLOMON IS.: Bougainville, Kokura, nr Crown Prince Rd, 900 m, 1 ♂, 8.vi.1956 (*J. L. Gressitt*), in author's collection.

BIOLOGY. Unknown.

REMARKS. This species is similar to *crenulata* in the male plate and aedeagus but can be separated from that species by a very distinctive pygofer process which is slightly expanded subapically and has a finger-like lobe apically.

***Tharra flavomaculata* Metcalf**

(Text-figs 421–425)

Tharra flavomaculata Metcalf, 1950 : 73.

T. flavomaculata is a highly variable species, both in colour and size. Sexual dimorphism is apparent among four of the five known subspecies. The females are decidedly more marked than the males. The male and female genital characters are identical among all subspecies. Separation of the various forms is based on geographical distribution (primarily Caroline Islands, Micronesia) and colour of the elytra. These forms can be separated from the closely related species *robusta* by the presence of the very short ventral appendage of the aedeagus.

T. flavomaculata flavomaculata occurs in the eastern part of the Caroline Islands, primarily on Truk Island. *T. f. superba* is restricted to the far eastern area of the Carolines on Kusaie Island, whereas *T. f. palauensis* is on the Palau Islands in the far western end of the Island chain. *T. f. yapicola* is known from Yap Island on the eastern end of the Caroline Islands and Guam, which is just north-east of Yap on the southern end of the Mariana Islands. *T. f. ponapensis* is restricted to Ponape Island near the eastern end of the Caroline Islands.

KEY TO THE SUBSPECIES OF *T. flavomaculata*

1	Males	2
	Females	6
2	(1) Elytra with up to 3 distinct anterior rufous vittae	3
	Elytra without vittae	5
3	(2) Vittae very broad, middle band long, extending obliquely toward costa	4
	Vittae very narrow, middle band short, not extending toward costa	
	<i>f. palauensis</i> Linnavuori (p. 157)	
4	(3) Vittae very prominent against deep fuscous ground; distribution Truk Island	
	<i>f. flavomaculata</i> Metcalf (p. 154)	

- Vittae semiprominent against light fuscous ground; distribution Ponape Island
- f. ponapensis* Linnavuori (p. 158)
- 5 (2) Elytra suffused with light rufous along anterior three-fourths, distinct narrow transverse fuscous band subapically *f. superba* Linnavuori (p. 156)
- Elytra suffused with fuscous throughout, sometimes with small rufous spots on costa *f. yapicola* Linnavuori (p. 157)
- 6 (1) Elytra with prominent yellow or ivory spot on clavus 7
- Elytra with a pair of long rufous vittae on clavus *f. palauensis* Linnavuori (p. 157)
- 7 (6) Claval spot small to moderate size, not occupying entire mid length of clavus 8
- Claval spot very large, oval-shaped, occupying entire mid length of clavus
- f. superba* Linnavuori (p. 156)
- 8 (7) Claval spot small to moderate size, occupying middle of clavus 9
- Claval spot moderate size, with lateral extension anteriorly
- f. ponapensis* Linnavuori (p. 158)
- 9 (8) Claval spot yellow, moderate size *f. flavomaculata* Linnavuori (p. 154)
- Claval spot ivory, small *f. yapicola* Linnavuori (p. 157)

Tharra flavomaculata flavomaculata Metcalf

(Text-figs 42I-425)

Tharra flavomaculata Metcalf, 1950 : 73. Holotype ♀, CAROLINE Is.: Truk Is., Dublon I., 23.xii.1935 (lost, see p. 155). NEOTYPE ♂, CAROLINE Is.: Truk Is. (BPBM, Honolulu), here designated [examined].

Tharra rubrovittata Metcalf, 1950 : 75. Holotype ♂, CAROLINE Is.: Palau Is. (BPBM, Honolulu) [examined]. **Syn. n.**

Tharra flavomaculata Metcalf; Metcalf, 1964 : 24.

Tharra flavomaculata flavomaculata Metcalf; Linnavuori, 1960a : 290.

Tharra rubrovittata Metcalf; Metcalf, 1960 : 25.

Tharra rubrovittata Metcalf; Linnavuori, 1960a : 289.

Length: ♂ 4.30-4.50 mm, ♀ 5.00-5.30 mm.

General colour rufous in ♂, fuscous with ivory spots on clavus in ♀, sexual dimorphism apparent. Crown light fuscous; eyes deep rufous; pronotum ochraceous to fuscous; scutellum ochraceous to light griseous; elytra with three broad, long, rufous vittae on anterior portion and with fuscous apex in ♂; clavus with prominent ivory or yellow spots and numerous small ivory or yellow spots near apex of elytra in ♀; clypeus ochraceous posteriorly with a fuscous band anteriorly in both sexes; clypellus ochraceous in both sexes.

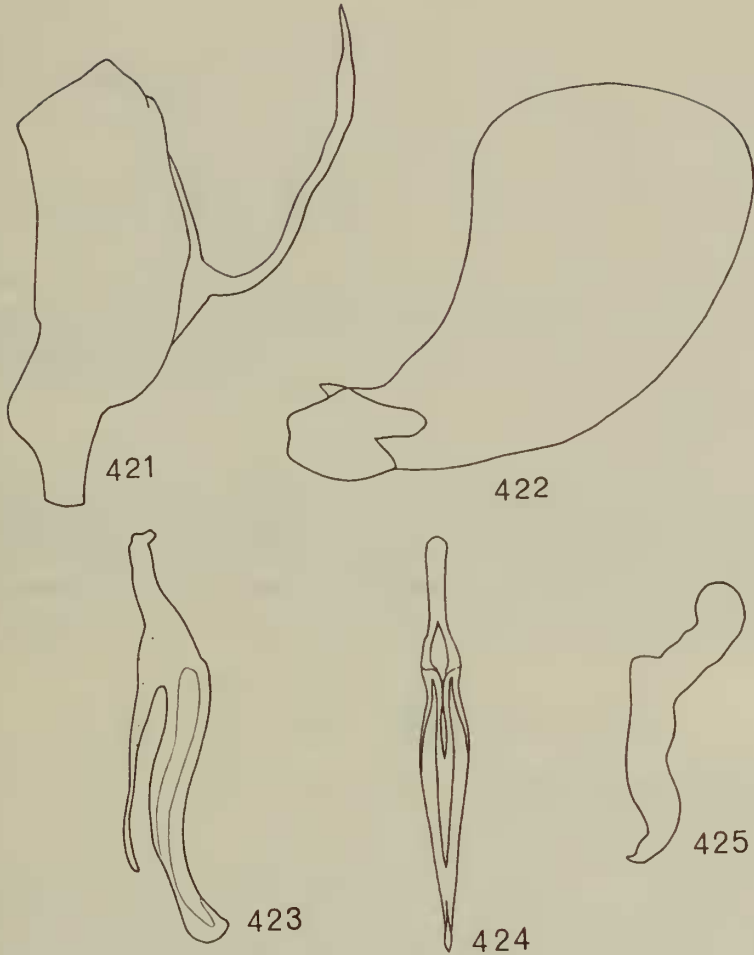
Male pygofer in lateral aspect with long, broadly sinuate, narrow process arising from near middle of caudal margin, process with lateral margins nearly equidistant, broadly curved, sinuate, apex pointed; aedeagus in lateral aspect with dorsal appendage broad throughout, slightly curved subapically, without spines or flanges; ventral appendage short, narrow, broad basally, apex basad of apex of dorsal appendage; gonopore apical; connective Y-shaped; style hooked apically; plate with distal segment elongate, posterior margin broadly expanded subapically.

Female seventh sternum with posterior margin produced medially, slightly notched at middle.

DISTRIBUTION. Caroline Islands.

SPECIMENS EXAMINED.

Tharra flavomaculata Metcalf, neotype ♂, CAROLINE Is.: Truk Is., Dublon I., 9.i.1936 (*Z. Ono*) (BPBM, Honolulu). *Tharra rubrovittata* Metcalf, holotype [not ♀ as stated by Metcalf, 1950 : 76], CAROLINE Is.: Palau Is., Babelthuap I., Melekeiok, 7.iv.1936 (*Z. Ono*) (BPBM, Honolulu).



FIGS 421-425. *Tharra flavomaculata* Metcalf. 421, male pygofer, lateral view; 422, plate, lateral view; 423, aedeagus, lateral view; 424, aedeagus, dorsal view; 425, style, lateral view.

I have examined what remains of the original type-material of *T. flavomaculata* in the BPBM, Honolulu. The holotype (data given in the synonymy) was missing from the pin and is presumed lost. The female paratype (CAROLINE IS.: Truk Is., Tarik I., 7.i.1936 (*Z. Ono*)) had been dissected, presumably by Metcalf, and was nearly destroyed, with only the damaged elytra remaining. The dissected remains imbedded in a capsule of damar and attached to the specimen proved to be the genitalia of a cixiid. For all intents and purposes the type-material of *flavomaculata* is no longer extant. Inasmuch as *flavomaculata* and *rubrovittata* are synonymous, the former representing the female and the latter the male of the same species, a male specimen from the type-locality is here designated as the neotype in order that the nomenclature of the species be stabilized.

CAROLINE Is.: Fananu I., Nomwin Atoll, 15 ♂, 1 ♀, 17-18.ii.1954 (*J. W. Beardsley*); Truk Is., Fefan I., Mt Iron, 3 ♂, 31.i.1953 (*J. L. Gressitt*); Truk Is., Moen, 4 ♂, 1 ♀, 9.iv.1949 (*R. W. L. Potts*); Truk Is., Dublon, 1 ♀, 9-13.ii.1948 (*K. L. Maehler*); Truk Is., Moen I., Mt Terok, 2 ♀, 28.xii.1952 (*J. L. Gressitt*); Truk Atoll, Dublon I., 2 ♂, 4 ♀, 10-11.ii.1948; Truk Atoll, Pis I., 3 ♂, 3.vi.1946 (*H. K. Townes*); Truk Is., Moen, 2 ♂, 2 ♀, 23.v.-31.vii.1946 (*H. K. Townes*); Truk Atoll, Tol I., Mt Unibot, 1 ♂, 3.i.1953 (*J. L. Gressitt*).

A careful study of the material on hand showed that there exists a sexual dimorphism of this species. The male is characterized by the bright red vittae on the elytra, while the female has a distinct, broad, ivory spot on the clavus. Through association of the sexes, *rubrovittata* Metcalf and *flavomaculata* Metcalf were found to represent a male and female, respectively, of the same species, thus *flavomaculata* is the valid species by priority by pagination. The illustrations of *rubrovittata* by Metcalf (1950:75, figs 10, a-c) represent a male and not a female as stated in his paper.

BIOLOGY. Unknown.

REMARKS. *Tharra flavomaculata* is the nominate form of five subspecies and can only be separated from these forms by the colour patterns as described in the forewings and by geographical distribution. The males are ochraceous with light orange on elytra, with a narrow subapical fuscous band. The females are beautifully marked with a long ivory or yellow oval spot on clavus and a long, narrow band along middle of costa against a deep fuscous ground.

Tharra flavomaculata superba Linnavuori

Tharra flavomaculata superba Linnavuori, 1960a:293. Holotype ♂, CAROLINE Is.: Kusaie (USNM, Washington) [examined].

Length: ♂ 4.90-5.30 mm, ♀ 5.60-5.90 mm.

General colour ochraceous with a narrow, fuscous subapical band on elytra in ♂, fuscous to testaceous with numerous yellow or ivory markings on elytra and dorsal area of head, pronotum and scutellum in ♀; sexual dimorphism apparent. Crown ochraceous with a narrow, longitudinal fuscous marking along middle in ♂, deep testaceous with two lateral spots along middle between eyes in ♀; pronotum ochraceous in ♂, fuscous with a broad yellow band along anterior margin between eyes in ♀; scutellum ochraceous in ♂, deep testaceous with a large, semicircular yellow spot along middle in ♀, elytra ochraceous to orange with a narrow fuscous subapical band in ♂, deep testaceous with a long, lateral yellow band anteriorly on clavus, a broad longitudinal ivory spot along clavus, a long, narrow yellow band along middle of costa, and three small yellow spots subapically in ♀; clypeus and clypellus ochraceous in ♂, pale ochraceous in ♀ with a broad T-shaped fuscous band on clypeus; external morphological characteristics as in the nominate form, *flavomaculata*; male and female genitalia as in the nominate form, *flavomaculata*.

DISTRIBUTION. Caroline Islands: Kusaie.

SPECIMENS EXAMINED.

Tharra flavomaculata superba Linnavuori, holotype ♂ and allotype ♀, CAROLINE Is.: Kusaie, Mt Matante, 11.ii.1953 (*Clark*) (USNM, Washington).

CAROLINE Is.: Kusaie I., Mt Tefayat, 800-1200 ft, 6 ♂, 6 ♀, 21.viii.1946 (*H. K. Townes*); Kusaie I., Mt Buache, 1500-1930 ft, 3 ♂, 19.viii.1946 (*H. K. Townes*); 2 ♂, same data as holotype;

Kusaie, Lele I., 1 ♂, 1 ♀, 15.i.1953 (*J. L. Gressitt*); Kusaie, Malem R., 90 m, 1 ♀, 27.iv.1953 (*J. F. G. Clarke*).

BIOLOGY. Unknown.

REMARKS. This subspecies can be separated from the nominate form by the colour characters and geographical distribution. The males are unicolorous, ochraceous, and the females testaceous with ivory or yellow markings. The subspecies occurs on the eastern end of the Caroline Islands, on Kusaie Island.

Tharra flavomaculata palauensis Linnavuori

Tharra flavomaculata palauensis Linnavuori, 1960a : 294. Holotype: ♂, CAROLINE Is.: Palau (USNM, Washington) [examined].

Length: ♂ 4.00–4.30 mm, ♀ 5.10–5.30 mm.

General colour fuscous with distinct long, red vittae on the elytra in both sexes. Crown light ochraceous; eyes rufous; pronotum ochraceous with fuscous lateral angles; scutellum ochraceous with fuscous lateral angles; elytra deep fuscous, three, long, red vittae on elytra in ♂, vittae much broader and occupying most of the clavus in the ♀, with four, red, small spots subapically in ♀; clypeus ochraceous with a narrow fuscous band anteriorly in ♂, band very broad in ♀ and with a narrow, longitudinal fuscous band along middle; clypellus ochraceous in ♂, ochraceous in ♀ with a fuscous longitudinal band medially; external morphological characteristics as in nominate form, *flavomaculata*; male and female genitalia as in nominate form, *flavomaculata*.

DISTRIBUTION. Micronesia: Palau Islands.

SPECIMENS EXAMINED.

Tharra flavomaculata palauensis Linnavuori, holotype ♂, CAROLINE Is.: Palau:, Auluaptagel, 10.v.1953 (*Beardsley*) (USNM, Washington); allotype ♀, CAROLINE Is.: Peleliu I., 29.i.1948 (*Dybas*) (USNM, Washington).

CAROLINE ISLANDS: Palau Is., Auluaptagel, Aurapushekaru, 1 ♂, 2 ♀, ix. 1952 (*N. L. H. Krauss*); Peleliu I., 1 ♂, 2 ♀, 29.i.1949 (*H. S. Dybas*); Palau Is., Kayangel Atoll, Ngariungs, 1 ♂, 16.xii.1952 (*J. L. Gressitt*); Peleliu Is., Babelthuap I., E. Ngatpang, 65 m, 1 ♀, 10.xii.1952 (*J. L. Gressitt*); Palau, Koror I., 1 ♀, 19.viii.1953 (*J. W. Beardsley*).

BIOLOGY. Unknown.

REMARKS. *Tharra flavomaculata palauensis* can be separated from the other subspecies by the colour characters and distribution. The species occurs on the western end of the Caroline Islands on the Islands of Palau. Sexual dimorphism is absent in this subspecies to the extent that the females only have an additional spot on the subapical part of the forewing; both sexes have the distinct red vittae against the fuscous background.

Tharra flavomaculata yapicola Linnavuori

Tharra flavomaculata yapicola Linnavuori, 1960a : 295. Holotype ♂, CAROLINE Is.: Yap (USNM, Washington) [examined].

Length: ♂ 5.30 mm, ♀ 5.50 mm.

General colour fuscous in both sexes. Crown, pronotum and scutellum light ochraceous to

light fuscous; elytra deep fuscous in ♂ with a few pale spots on apical portion of wing; elytra deep fuscous in ♀ with several small, pale spots; clypeus ochraceous with a broad, fuscous band anteriorly, absent in ♀; clypellus fuscous in both species; external morphological characteristics as in the nominate form, *flavomaculata*; male and female genitalia as in nominate form, *flavomaculata*.

DISTRIBUTION. Micronesia: Caroline Islands, Mariana Islands (new record), Guam (new record).

SPECIMENS EXAMINED.

Tharra flavomaculata yapicola Linnavuori, holotype ♂ and allotype ♀, CAROLINE IS.: Yap, hill behind Yaptown, 60 m, 3.xii.1952 (*J. L. Gressitt*) (USNM, Washington).

CAROLINE IS.: Yap I., 7 ♂, 1 ♀, 3.xii.1952 (*J. L. Gressitt*); Yap I., Mt Gillifies, 1 ♂, 1 ♀, 29.xi.1952 (*J. L. Gressitt*); Yap I., Yap, Mt Matade, 95 m, 1 ♂, 2 ♀, 1.xii.1952 (*J. L. Gressitt*). MARIANA IS., Guam I., Pt Ritidian, 1 ♂, x. 1952 (*N. L. H. Krauss*); 1 ♂, 1.viii.1945 (*J. L. Gressitt*).

BIOLOGY. Unknown.

REMARKS. This subspecies of *flavomaculata* can be separated from the others by the colour patterns on the forewings and the distribution. The forewings of both species are unicolourous, and the subspecies occurs in the western end of the Caroline Islands and on Guam on the southern extremity of the Mariana Islands.

Tharra flavomaculata ponapensis Linnavuori

Tharra flavomaculata ponapensis Linnavuori, 1960a : 292. Holotype ♂, CAROLINE IS.: Ponape (USNM, Washington) [examined].

Length: ♂ 4.90 mm, ♀ 5.40 mm.

General colour light fuscous with numerous red markings on the forewing in ♂, deep fuscous with orange and ivory markings on forewings in ♀; sexual dimorphism apparent. Crown, pronotum and scutellum ochraceous in ♂, light fuscous in ♀ with fuscous markings on pronotum and scutellum; elytra fuscous to partially testaceous with numerous red vittae and spots all along elytra in ♂, fuscous with numerous markings on elytra in ♀; clavus marked with a broad, pale spot. The external morphology of this subspecies is the same as in the nominate form, *flavomaculata*; male and female genitalia as in *flavomaculata*, the nominate form.

DISTRIBUTION. Caroline Islands: Ponape Islands.

SPECIMENS EXAMINED.

Tharra flavomaculata ponapensis Linnavuori, holotype ♂ and allotype ♀, CAROLINE IS.: Ponape, Mt Kupwuriso, 60 m, 10.iii.1948 (*Dybas*) (USNM, Washington).

CAROLINE IS.: Ponape, Matalanim Plantation, 2 ♂, 2 ♀, vi.-ix. 1950 (*P. A. Adams*); Ponape, Tolotom, 3 ♂, vi.-ix. 1950 (*P. A. Adams*); Ponape, Mt Kupuriso, 2000 ft, 1 ♂, 10.iii.1948 (*H. S. Dybas*); Ponape, Palang, W. Coast, 15 m, 1 ♂, 10.i.1953 (*J. L. Gressitt*); Ponape, Mt Beirut, 1 ♀, vi.-ix. 1950 (*P. A. Adams*); Ponape, Mt Tolenkiup, 1 ♂, vi.-ix. 1950 (*P. A. Adams*); Ponape, Mt Dolennankap, 1700-2000 ft, 1 ♂, 1 ♀, 10.viii.1946 (*H. K. Townes*); Ponape, Kiti, 1 ♀, 12.viii.1946 (*R. G. Oakley*).

BIOLOGY. Unknown.

REMARKS. This subspecies occurs on the eastern end of the Caroline Islands and can be distinguished by the colour markings on the wings.

Tharra ogygia Kirkaldy

(Text-figs 426-430)

Tharra ogygia Kirkaldy, 1907 : 76. Holotype ♀, FIJI (BPBM, Honolulu) [examined].*Tharra ogygia* Kirkaldy; Linnavuori, 1959 : 14.*Tharra atriceps* Linnavuori, 1960b : 27. Holotype ♂, FIJI (BPBM, Honolulu) [examined].**Syn. n.***Tharra ogygia* Kirkaldy; Linnavuori, 1960b : 27.*Tharra ogygia* Kirkaldy; Metcalf, 1964 : 25.

Length: ♂ 5.00-5.40 mm, ♀ 5.90-6.00 mm.

General colour ochraceous to deep fuscous. Crown, pronotum and scutellum light ochraceous to deep fuscous; eyes light rufous to rufous; elytra ochraceous to deep fuscous, colour generally deeper in ♀; clypeus and clypellus ochraceous.

Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, slightly depressed medially, lateral margins nearly parallel or slightly convergent basally, disk elevated above level of eyes; ocelli small, situated anteriorly; eyes moderate size, semiglobular, occupying a little over half entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, lateral margins excised along middle near antennal sockets, without median longitudinal carina, surface finely granulose, rugulose along anterior margin; clypellus with lateral margins expanded apically.

Male pygofer in lateral aspect with large, broad, twisted process arising from caudoventral margin, process with lateral margin broad basally, becoming slightly sinuate subapically and twisted or abruptly curved subapically, apex pointed, sometimes with longitudinal striations along entire shaft of process; aedeagus in lateral aspect with dorsal appendage somewhat narrowed throughout, slightly constricted subapically and expanded apically, without spines or flanges; ventral appendage short, somewhat tube-like, expanded apically and slightly exceeding apex of dorsal appendage; gonopore apical; connective Y-shaped; style broadly clawed apically; plate with distal segment elongate, dorsal margin expanded medially.

Female seventh sternum with posterior margin produced medially.

This species is highly variable in form and colour.

DISTRIBUTION. Fiji Islands.

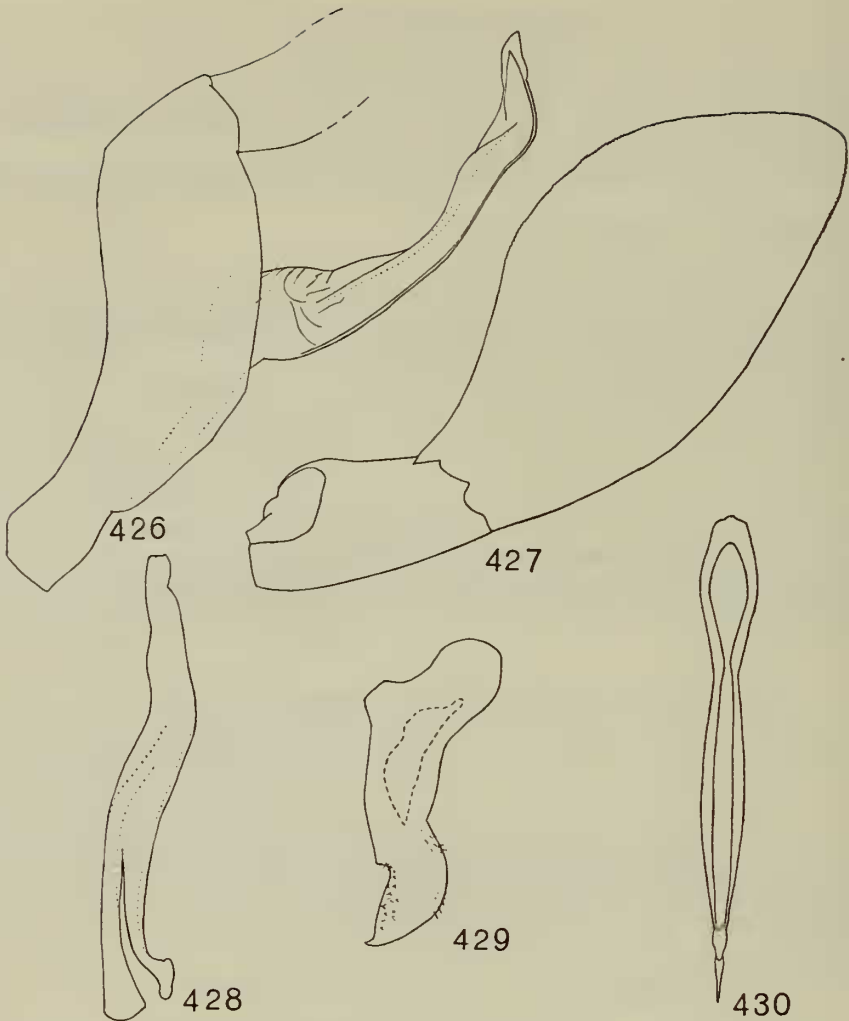
SPECIMENS EXAMINED.

Tharra ogygia Kirkaldy, holotype ♀, FIJI: Viti Levu, Rewa, iii. 1906 (*Muir*) (BPBM, Honolulu). *Tharra atriceps* Linnavuori, holotype ♂, FIJI: Viti Levu, Tholo-i-Suva, i. 1951 (*Krauss*) (BPBM, Honolulu); allotype ♀, FIJI: Viti Levu, Navai, v. 1951 (*Krauss*) (BPBM, Honolulu).

FIJI: Nandarivatu, Viti Levu, 2700 ft, 2 ♂, ix. 1938 (*E. C. Zimmerman*); Viti Levu, 850 m, 1 ♂, 1 ♀, 8-13.iii.1963 (*C. M. Yoshimoto*); Wakaya, 1 ♂, 17.x.1934 (*E. H. Bryan*); Mt Victoria, Tholo N.W. slope, 1 ♀, 13.ix.1938 (*E. C. Zimmerman*); Vanna Levu, Nakawanga, 1 ♀, 9.x.1955; Bua, 1 ♂, ix. 1922 (*H. W. Simmonds*); Taveuni, 1 ♂, 22.xii.1921 (*H. W. Simmonds*).

Examination and comparisons of the types of *ogygia* and *atriceps* reveal that these two species are identical, *ogygia* being the valid name through priority. The illustration of *Tharra ogygia* by Linnavuori (1960 : 26, fig. 9) is not that species.

BIOLOGY. Unknown.



FIGS 426-430. *Tharra ogygia* Kirkaldy. 426, male pygofer, lateral view; 427, plate, lateral view; 428, aedeagus, lateral view; 429, style, lateral view; 430, aedeagus, dorsal view.

REMARKS. This species can be separated from other common species on Fiji by the presence of the large, curved or twisted pygofer process and the elongate plate which is expanded on the dorsal margin.

Tharra kalypso Kirkaldy

(Text-figs 431-435)

Tharra kalypso Kirkaldy, 1907 : 76. Holotype ♀, FIJI (BPBM, Honolulu) [examined].

Tharra atriceps lauensis Linnavuori, 1960b : 28. Holotype ♂, FIJI (BPBM, Honolulu) [examined]. **Syn. n.**

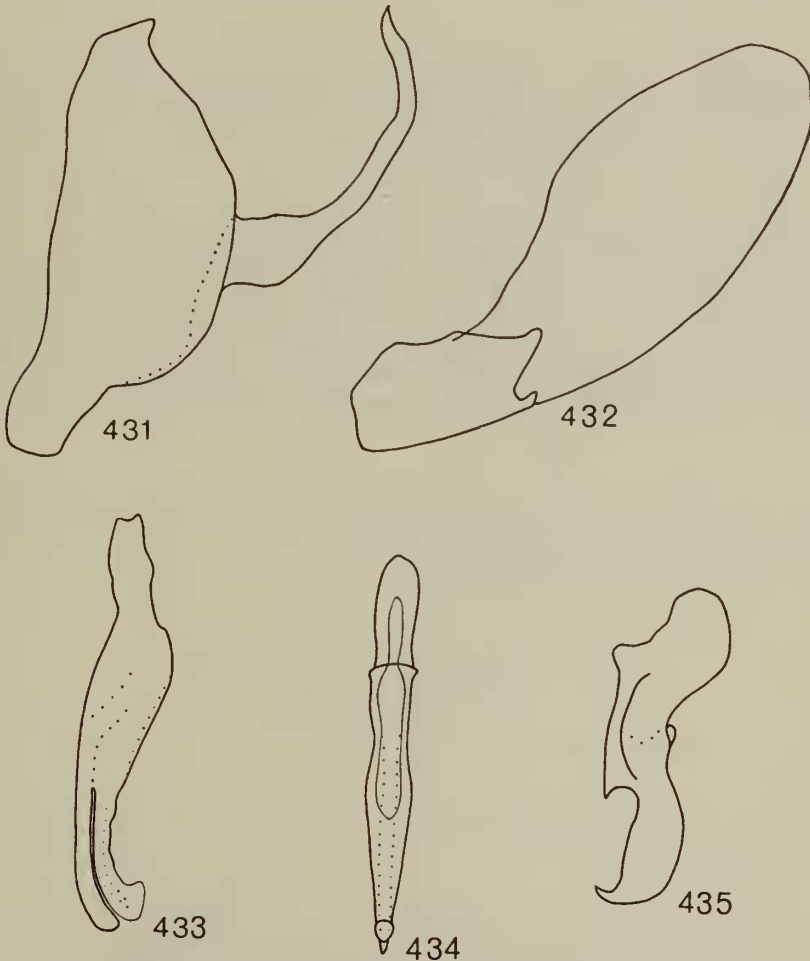
Tharra kalypto Kirkaldy; Linnavuori, 1960b : 25.

Tharra kalypto Kirkaldy; Metcalf, 1964 : 24.

Length: ♂ 4.90–5.30 mm, ♀ not available.

General colour light fuscous. Crown ochraceous to fuscous; eyes yellow to rufous; pronotum rufous to deep fuscous; scutellum light fuscous to deep fuscous; elytra light fuscous to deep fuscous with light ochraceous spots, two small spots on clavus, one large one at the apex of clavus, one very large spot along middle of claval area and subapically; clypeus light fuscous to rufous; clypellus ochraceous to light rufous.

Head narrower than pronotum; crown short and broad, produced distally beyond anterior margin of eyes, distal length slightly less than one-third entire median length, slightly depressed medially, lateral margins slightly convex, disk elevated considerably above level of eyes; ocelli small, situated anteriorly; eyes large, semiglobular, occupying about two-thirds entire dorsal area of head; pronotum short, about equal to median length of crown; scutellum large, median



FIGS 431–435. *Tharra kalypto* Kirkaldy. 431, male pygofer, lateral view; 432, plate, lateral view; 433, aedeagus, lateral view; 434, aedeagus, dorsal view; 435, style, lateral view.

length greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, lateral margins slightly excavated near middle near antennal sockets, without median longitudinal carina, surface finely granulose, narrowly rugulose along anterior margin; clypellus with lateral margins expanded apically.

Male pygofer in lateral aspect with long, narrow, curved, sinuate process arising from near middle of caudal margin, process with lateral margins broad basally, becoming narrowed subbasally and sinuate throughout, sharply pointed apically; aedeagus in lateral aspect with dorsal appendage short, narrowed, apex broadly expanded and curved dorsally, without spines or flanges; ventral appendage short, narrow, tube-like, produced slightly beyond apex of dorsal appendage; gonopore apical; connective Y-shaped; style broadly clawed apically; plate with distal segment narrow, elongate, dorsal margin expanded medially.

DISTRIBUTION. Fiji Islands.

SPECIMENS EXAMINED.

Tharra kalypto Kirkaldy, holotype ♀, FIJI: Viti Levu, Rewa, iv. 1906 (*Muir*) (BPBM, Honolulu). *Tharra atriceps lauensis* Linnavuori, holotype ♂, FIJI: Lau Aiwa, 1.viii.1924 (*E. H. Bryan*) (BPBM, Honolulu); allotype ♀, FIJI: Lau Tuvetha, 2.ix.1924 (*E. H. Bryan*) (BPBM, Honolulu).

FIJI: Loma Loma, Vanua, Mebelevu, 1 ♂, 7.viii.1938 (*E. C. Zimmerman*); Levu, 1 ♂, 17.vi.1915 (*R. Veitch*); Ovalau, 1 ♂, 8.xii.1921 (*H. W. Simmonds*); Vanua Levu, Nakewanga, 1 ♂, 5.x.1955 (*J. L. Gressitt*); Namuka, 1 ♂, 12.viii.1924 (*E. H. Bryan*).

Following examination of the type of *atriceps lauensis* and comparison of this specimen with the type of *kalypto*, I have found that the characteristics of the genitalia are similar in both subspecies and species, respectively, and therefore I have elected to synonymize the former name, *kalypto* being the valid name by priority.

BIOLOGY. Unknown.

REMARKS. This species is similar to *ogygia* in male genital characteristics and can be distinguished from that species by the much broader crown, the very narrow pygofer process and the broadly clawed style.

Tharra nausikoides Linnavuori **stat. n.**

(Text-figs 436-440)

Tharra atriceps nausikoides Linnavuori, 1960b : 27. Holotype ♂, FIJI (BPBM, Honolulu) [examined].

Length: ♂ 4.60-4.90 mm, ♀ unknown.

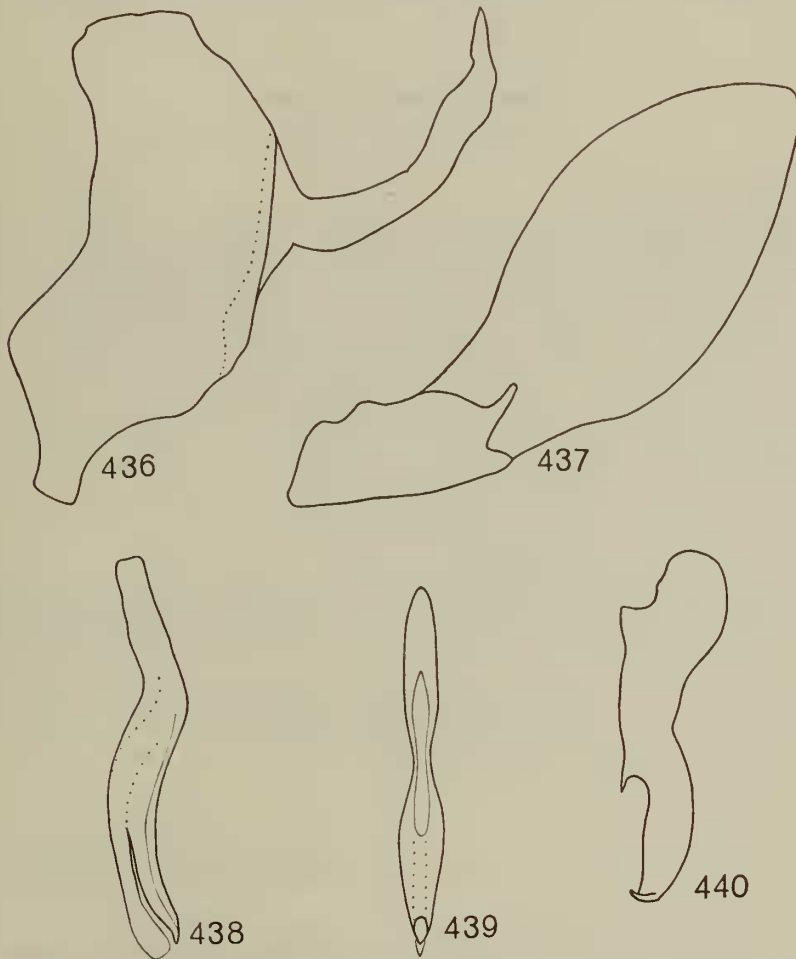
General colour fuscous. Crown ochraceous; eyes rufous; pronotum deep fuscous; scutellum light fuscous; elytra fuscous with a narrow ochraceous band along costal area; clypellus and clypeus ochraceous.

Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, lateral margins slightly convex, disk elevated above level of eyes; ocelli small, situated anteriorly; eyes large, somewhat globular, occupying nearly one-third entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent,

appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, lateral margins slightly excised near antennal sockets, without median longitudinal carina, surface finely granulose, narrowly rugulose along anterior margin; clypellus with lateral margins expanded apically

Male pygofer in lateral aspect with long, curved process arising from near middle of caudal margin, process with lateral margins sinuate throughout, apex tapered; aedeagus in lateral aspect with dorsal appendage short, narrowed throughout, becoming attenuated apically, without spines or flanges; ventral appendage short, somewhat tube-like, apex expanded, extending beyond apex of dorsal margin; gonopore apical; connective Y-shaped; style broadly clawed apically; plate with distal segment elongate, narrow and acutely angled apically, lateral and dorsal margins somewhat expanded medially.

DISTRIBUTION. Fiji Islands.



FIGS 436-440. *Tharra nausikoides* Linnavuori. 436, male pygofer, lateral view; 437, plate, lateral view; 438, aedeagus, lateral view; 439, aedeagus, dorsal view; 440, style, lateral view.

SPECIMENS EXAMINED.

Tharra atriceps nausikoides Linnavuori, holotype ♂, FIJI: Loluiti, 18.ix.1920 (W. Greenwood) (BPBM, Honolulu).

FIJI: 1 ♂, same data as holotype.

BIOLOGY. Unknown.

REMARKS. Following examination and dissection of the type of *atriceps nausikoides* Linnavuori and comparison of this specimen with the type of *atriceps* Linnavuori, which is a synonym of *ogygia* Kirkaldy, I have elevated *nausikoides* to the species level on the following basis: the style is much more broadly clawed apically, the pygofer process is much narrower and the colour patterns of the body are also more distinctive than in type-specimens of *atriceps* and *ogygia*.

***Tharra stabula* sp. n.**

(Text-figs 441-445)

Length: ♂ 5 mm, ♀ unknown.

General colour light fuscous. Crown ochraceous with a large, deep fuscous spot on anterior third; eyes light griseous; pronotum deep ochraceous; scutellum light fuscous; elytra light fuscous; clypeus ochraceous at basal half, deep fuscous at apical half; clypellus ochraceous.

Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, slightly depressed medially, lateral margins nearly parallel, disk elevated above level of eyes; ocelli small, situated anteriorly; eyes large, somewhat elongate, occupying about two-thirds entire dorsal area of head; pronotum short, median length less than median length of crown; scutellum large, median length greater than median length of pronotum; elytra elongate, veins slightly obscured, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, lateral margins incised near antennal sockets, without median longitudinal carina, surface finely granulose, rugulose along anterior margin; clypellus with lateral margins slightly expanded apically.

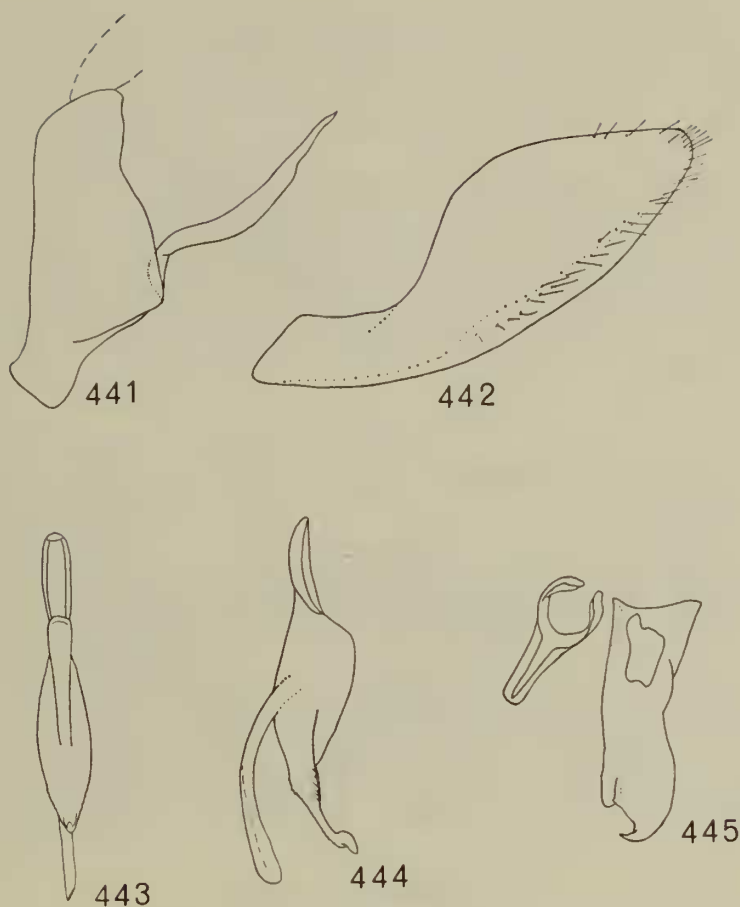
Male pygofer in lateral aspect with long, curved, process arising from caudoventral margin, process with lateral margins narrowed basally, slightly expanded medially, becoming narrowly attenuated apically, outer lateral margin becoming aperturized at apical third; aedeagus in lateral aspect with dorsal appendage broad at basal half, becoming constricted subapically, slightly bulbous apically and curved caudodorsally, covered with numerous, very fine spicules along ventral margin, without spines or flanges; ventral appendage long, narrow, tube-like, slightly expanded apically, extending beyond apex of dorsal appendage; gonopore apical; connective Y-shaped; style narrowly clawed apically; plate with distal segment elongate, dorsal margin expanded medially.

SPECIMENS EXAMINED.

Holotype ♂, RAJA AMPAT Is. (West Irian): Misoöl (Wallace) (BMNH, London).

BIOLOGY. Unknown.

REMARKS. This is a rare species known only from the holotype male and has unique characteristics which separate it from all other species of *Tharra* by the presence of the many fine spicules on the ventral margin of the aedeagus and by the style, which is narrowly clawed apically.



FIGS 441-445. *Tharra stabula* sp. n. 441, male pygofer, lateral view; 442, plate, lateral view; 443, aedeagus, dorsal view; 444, aedeagus, lateral view; 445, style and connective, dorsolateral view.

Tharra ocellata Metcalf

(Text-figs 446-453)

Tharra ocellata Metcalf, 1946 : 132. Holotype ♂, GUAM (BPBM, Honolulu) [examined].

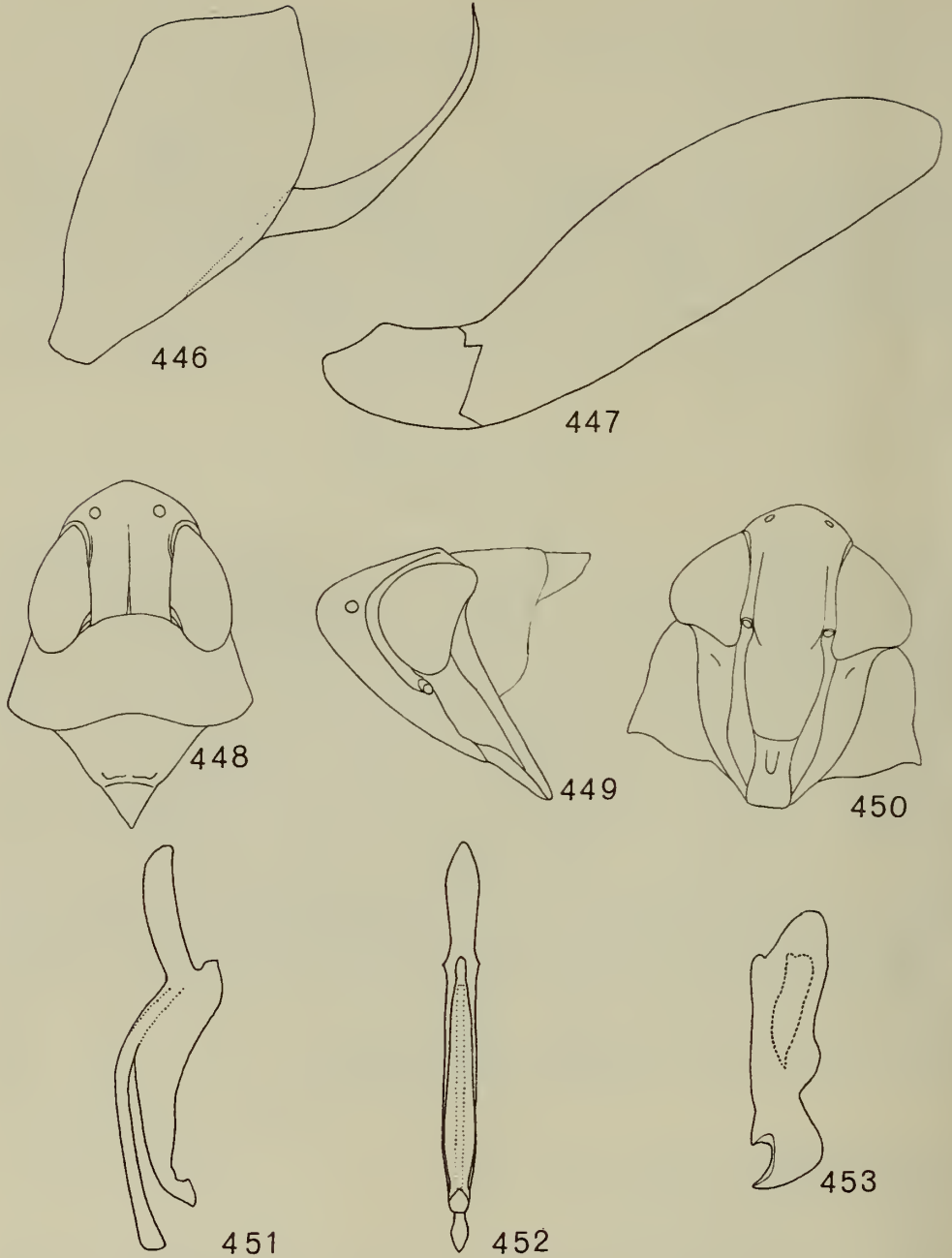
Tharra ocellata Metcalf; Linnavuori, 1960a : 288.

Tharra ocellata Metcalf; Metcalf, 1964 : 25.

Length: ♂ 5.30 mm, ♀ 6.00 mm.

General colour ochraceous. Crown ochraceous; eyes fuscous; pronotum and scutellum rufochraceous; elytra ochraceous, smoky fuscous at apex; clypeus testaceous anteriorly, ochraceous posteriorly in ♂, ochraceous throughout in ♀; clypellus ochraceous in both sexes.

Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, striate radially, depressed medially between eyes, lateral margins nearly parallel, disk elevated considerably above eyes; ocelli very large in ♂, small in ♀, situated anteriorly



FIGS 446-453. *Thavra ocellata* Metcalf. 446, male pygofer, lateral view; 447, plate, lateral view; 448, head, pronotum and scutellum, dorsal view; 449, head, pronotum and scutellum, lateral view; 450, face; 451, aedeagus, lateral view; 452, aedeagus, dorsal view; 453, style, lateral view.

in both sexes; eyes large, occupying almost two-thirds of the entire dorsal area of head; pronotum large, median length about equal to median length of crown; scutellum moderate size, median length less than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, lateral margin somewhat excised near antennal sockets, with faint, median longitudinal carina, surface finely granulate, rugulose along anterior margin; clypeus with lateral margins nearly parallel.

Male pygofer in lateral aspect with long, curved, process arising from caudoventral margin, process broad at basal half, narrowly attenuated at apical half; aedeagus in lateral aspect simple; dorsal appendage broad at basal three-fourths, narrowed apically and curved caudodorsally, without spines or flanges; ventral appendage long, narrow, tube-like, apex extending beyond apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with distal appendage very long and narrow, lateral margins nearly parallel.

Female seventh sternum with posterior margin produced medially.

DISTRIBUTION. Guam.

SPECIMENS EXAMINED.

Tharra ocellata Metcalf, holotype ♂, GUAM: Ritidian Pt, 16.iv.1936 (*E. H. Bryan, Jr*) (BPBM, Honolulu).

GUAM: Pt Ritidian, 2 ♂, 30.v.1945 (*G. E. Bohart & J. L. Gressitt*); Machanao, 1 ♂, 6.viii.1936 (*O. H. Swezey*); Upi Trail, 1 ♀, 5.v.1936 (*E. H. Bryan, Jr*); Haputo Pt, 14.iii.1948 (*K. L. Maehler*); Mt Sta. Rosa, 1 ♂, 3.vi.1945 (*G. E. Bohart*); Northern Guam I., 1 ♀, 29.iv.1946 (*N. L. H. Krauss*); Haputo Pt, on *Morinda citrifolia*, 1 ♂, 19.iii.1948; Harmon Field, 1 ♀, 30.i.1949; Potts Jct., 1 ♂, ix. 1952 (*N. L. H. Krauss*).

BIOLOGY. The only known host record is *Morinda citrifolia*. Collection records indicate that this species is most prevalent in May and June.

REMARKS. From *bimaculata*, to which it is similar in male genital characteristics, *ocellata* can be separated by the absence of the ivory spots on the elytra.

Tharra crenulata sp. n.

(Text-figs 454-458)

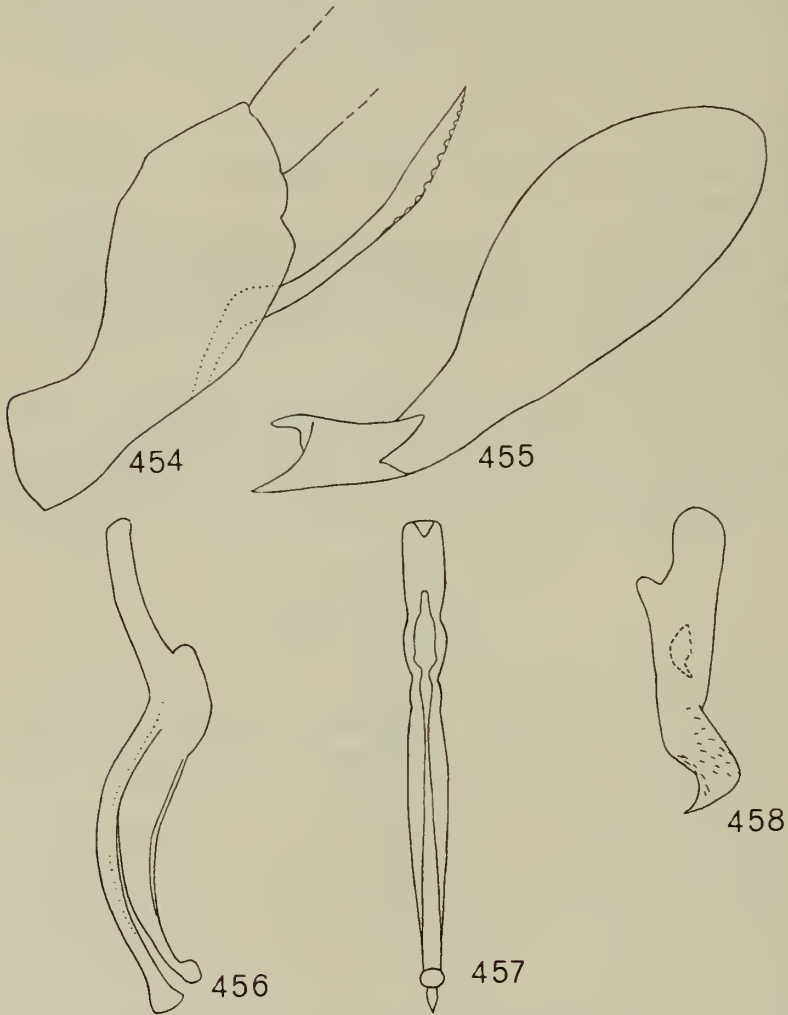
Length: ♂ 5.10-5.40 mm, ♀ 5.90-6.30 mm.

General colour fuscous to testaceous. Crown ochraceous; eyes rufous; pronotum fuscous to testaceous; scutellum fuscous to testaceous; elytra fuscous to testaceous with light fuscous area surrounding the appendix and subapically along the costal area; teneral forms sometimes very light ivory; clypeus ochraceous with a very distinctive transverse rufous band in ♀, very light or pale in ♂; clypellus ochraceous.

Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, slightly depressed medially, lateral margins slightly convex and slightly convergent basally, disk elevated above eyes; ocelli small, situated anteriorly; eyes moderate size, somewhat globular, occupying a little over half entire dorsal area of head; pronotum large, median length slightly less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, distinctly excised at about middle near antennal sockets, without median longitudinal carina, surface finely granulate, rugulose along anterior margin; clypellus with lateral margins slightly expanded apically.

Male pygofer in lateral aspect with long, curved process arising from caudodorsal margin, process with lateral margins nearly equidistant throughout except for apical half which is slightly attenuated, outer lateral margin somewhat dentate or reniform at apical half; aedeagus in lateral aspect with dorsal appendage somewhat broadened at basal three-fourths, attenuated at apical fourth, constricted subapically and slightly bulbous apically, curved caudodorsally, without spines or flanges; ventral appendage very long, narrow, tube-like, slightly curved, apex slightly bulbous, extending beyond apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with distal segment elongate, narrow, length about twice as long as width, dorsal margins slightly bulbous medially.

Female seventh sternum with posterior margin slightly convex on either side of middle.



FIGS 454-458. *Tharva crenulata* sp. n. 454, male pygofer, lateral view; 455, plate, lateral view; 456, aedeagus, lateral view; 457, aedeagus, dorsal view; 458, style, lateral view.

SPECIMENS EXAMINED.

Holotype ♂, NEW GUINEA: Amok, 165 m, 6.i.1960 (*T. C. Maa*) (BPBM, Honolulu).
 Paratypes. NEW GUINEA: allotype ♀, Waris, S. of Hollandia 450–500 m, 1–17.viii.1959 (*T. C. Maa*) (BPBM, Honolulu); Maprik, 6 ♂, 150 m, 29.vii.1959–17.i.1960 (*T. C. Maa*) (BPBM, Honolulu); Waris, S. of Hollandia, 450–500 m, 19 ♂, 4 ♀, 1–31.viii.1959 (*T. C. Maa*); Genjam, 40 km W. of Hollandia, 100–200 m, 2 ♂, 1–10.iii.1960 (*T. C. Maa*); Bodem, 100 m, 11 km S.E. of Oerberfaren, 3 ♂, 7–17.vii.1959 (*T. C. Maa*); Papua, Daradae Plain, 500 m, 80 km N. to Pt Moresby, 2 ♂, 4–5.ix.1959 (*T. C. Maa*); Hollandia area, Mt Sentani, Cyclops Mts, 150–250m, 1 ♂, 16.vi.1959 (*T. C. Maa*); Vogelkop, Kebar Valley, W. of Manokwari, 550 m, 1 ♂, 4–31.i.1962 (*L. W. Quate*); Amok, 165 m, 1 ♂, 6.i.1960 (*T. C. Maa*); Bainyik, 150 m, S. of Maprik, 12.i.1960 (*T. C. Maa*) (BPBM, Honolulu); Bodem, 100 m, 11 km S.E. of Oerberfaren, 1 ♂, 7–17.vii.1959 (*T. C. Maa*) (BMNH, London).
 NEW BRITAIN: Kerawat, 135 m, 3 ♂, 20–25.xi.1959 (*T. C. Maa*); Gazelle Peninsula, Kerawat, 60 m, 1 ♂, 11.ix.1955 (*J. L. Gressitt*) (BPBM, Honolulu); Vudal, S.W. of Kerawat, 3 ♂, 13.xii.1959 (*T. C. Maa*); Vudal, S.W. of Kerawat, 1 ♀, 13.xii.1959 (*T. C. Maa*) (USNM, Washington); 1 ♂, 1 ♀, same data as allotype ♀, in author's collection.

BIOLOGY. Unknown. Collection records indicate that this species is prevalent from August through January.

REMARKS. This species is similar to *bimaculata* in male genital characteristics but can be separated from that species by the distinctive crenulations along the outer lateral margin of the apical half of the pygofer process and by the lack of distinctive colour markings on the scutellum and elytra. The crown is shorter and broader in *crenulata*.

Tharra bimaculata sp. n.

(Text-figs 459–463)

This species comprises two subspecies which occur in the Solomon Islands and New Britain. The nominate form occurs in both regions and is characterized by distinctive yellow or ivory markings on the scutellum, clavus and elytra, whereas *T. b. vudalensis* is restricted to Vudal, New Britain, and is fuscous throughout except for a small subapical spot on the costa. The male genitalia are identical. The forms are similar in general habitus and ♂ aedeagal characteristics to *dorsimacula*, but can be separated from that species by the presence of a very narrow pygofer process and a very long, narrow plate.

KEY TO THE SUBSPECIES OF *T. bimaculata*

- | | | |
|---|---|---|
| 1 | Elytra fuscous with distinct yellow or ivory markings | <i>b. bimaculata</i> subsp. n. (p. 170) |
| | Elytra fuscous throughout, small yellow subapical spot on costa | <i>b. vudalensis</i> subsp. n. (p. 171) |

Tharra bimaculata bimaculata subsp. n.

(Text-figs 459-463)

Length: ♂ 5.30-6.00 mm, ♀ 6.00-6.60 mm.

General colour fuscous with ivory spots on elytra. Crown ochraceous; eyes fuscous; pronotum deep fuscous to testaceous; scutellum ochraceous; elytra fuscous to testaceous with a large ivory spot on middle of clavus and small ivory spots on remainder of elytra; clypeus and clypellus ochraceous.

Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, depressed medially between eyes, lateral margins slightly convergent basally, disk elevated above eyes; ocelli small, situated anteriorly; eyes moderate size, occupying nearly two-thirds dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, lateral margins constricted near antennal sockets, without median longitudinal carina, surface finely knobbed, rugulose along anterior margin; clypellus with lateral margins slightly concave.

Male pygofer in lateral aspect with long, slender, narrow, curved process arising from caudoventral margin, process with lateral margins broad basally, narrowly attenuated at apical three-fourths, outer lateral margin sinuate at apical fourth, apex sharply pointed; aedeagus in lateral aspect simple; dorsal appendage broad along basal three-fourths, narrowed apically, curved slightly dorsally, without spines or flanges; ventral appendage long, tube-like, apex expanded, reaching slightly beyond apex of dorsal appendage; gonopore apical; connective Y-shaped; style hooked apically; plate with distal appendage very long and narrow, slightly expanded medially along dorsal margin.

Female seventh sternum with posterior margin truncate.

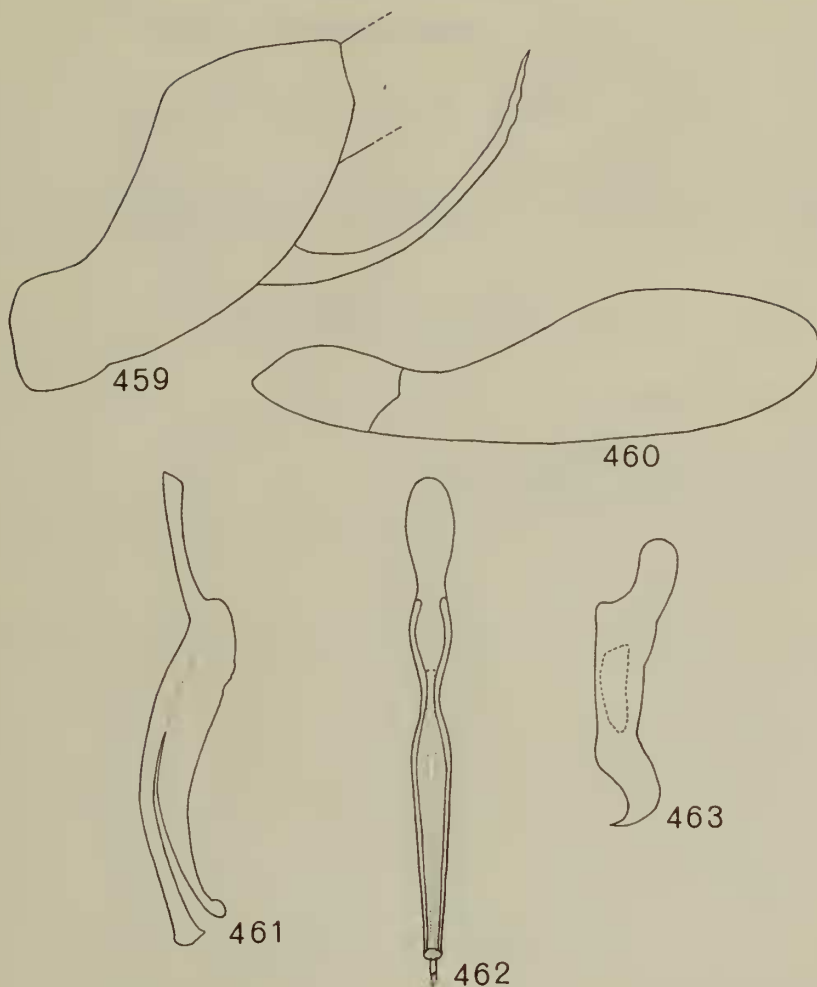
SPECIMENS EXAMINED.

Holotype ♂, SOLOMON Is.: Buka I., Gagan, 40 m, 8-11.xii.1959 (*T. C. Maa*) (BPBM, Honolulu).

Paratypes. SOLOMON Is.: allotype ♀, same data as holotype (BPBM, Honolulu); Buka I., Gagan, 40 m, 15 ♂, 1 ♀, 8-11.xii.1959 (*T. C. Maa*); Bougainville, Munurai, 40 m, 1 ♂, 7.vi.1956 (*J. L. Gressitt*); Bougainville, Borioko, 300 m, 1 ♀, 6.vi.1956 (*J. L. Gressitt*); Buka Agr. Sta., 1 ♂, 1 ♀, 6-10.xii.1959 (*T. C. Maa*) (BMNH, London); Bougainville, Boku, 50 m, 1 ♂, 1 ♀, 4.vi.1956 (*J. L. Gressitt*) (USNM, Washington); 1 ♂, 1 ♀, same data as holotype, in author's collection. NEW BRITAIN: Vudal, S.W. of Keravat, 6 ♀, 13.xii.1959 (*T. C. Maa*); Keravat, 135 m, 7 ♀, 20-25.xi.1959 (*T. C. Maa*); Gazelle Peninsula, Upper Warangoi, Illugi, 230 m, 1 ♀, 8-11.xii.1962 (*J. Sedlacek*) (BPBM, Honolulu); Vunabakan, 180 m, 10 km E. of Keravat, 3 ♀, 16-20.xi.1959 (*T. C. Maa*). NEW GUINEA: Waris, S. of Hollandia, 450-500 m, 1 ♀, 24-31.viii.1959 (*T. C. Maa*) (BPBM, Honolulu).

BIOLOGY. Unknown.

REMARKS. This subspecies can be separated from *bimaculata vudalensis* by the presence of rufous vittae on clavus of the male and with prominent ivory spots on clavus of the female.



FIGS 459-463. *Tharra bimaculata* sp. n. 459, male pygofer, lateral view; 460, plate, lateral view; 461, aedeagus, lateral view; 462, aedeagus, dorsal view; 463, style, lateral view.

***Tharra bimaculata vudalensis* subsp. n.**

Length: ♂ identical with nominate form, ♀ unknown.

General colour testaceous. Crown ochraceous; eyes rufofuscous; pronotum and scutellum deep testaceous; elytra fuscous to deep testaceous with a small ochraceous subapical spot on costal margin; clypeus and clypellus ochraceous; morphological characteristics of the body are similar to the nominate form.

Female genitalia similar to the nominate form.

SPECIMENS EXAMINED.

Holotype ♂, NEW BRITAIN: Vudal, S.W. of Keravat, 13.xii.1959 (*T. C. Maa*) (BPBM, Honolulu).

Paratypes. 7 ♂, same data as holotype (BPBM, Honolulu); 2 ♂, same data as holotype, in author's collection.

BIOLOGY. Unknown. Collection records indicate this species is prevalent from December to March.

REMARKS. This subspecies can be separated from the nominate form by the unicolourous testaceous colour of the body, and the distribution, which is Vudal, New Britain.

Tharra tahitiensis (Osborn) **comb. n.**

(Text-figs 464-468)

Jassus tahitiensis Osborn, 1934b : 116. Holotype ♀, SOCIETY Is.: Tahiti (BPBM, Honolulu) [examined].

Jassus insularis Osborn, 1934b : 117. Holotype ♂ [not ♀, as stated by Osborn], SOCIETY Is.: Tahiti (BPBM, Honolulu) [examined]. **Syn. n.**

Coelidia tahitiensis Osborn; Metcalf, 1964 : 77.

Coelidia osborni Metcalf, 1964 : 68. [Replacement name for *Jassus insularis* Osborn, 1934b, then a junior secondary homonym of *Coelidia insularis* Matsumura, 1914.] **Syn. n.**

Length: ♂ 6.30-6.70 mm, ♀ 6.90-7.30 mm.

General colour ochraceous in ♂, fuscous in ♀; sexual dimorphism apparent. Crown, pronotum and scutellum ochraceous; eyes deep fuscous; elytra unicolorous ochraceous in ♂, light fuscous to deep fuscous in ♀, veins deep fuscous in ♀; clypeus and clypellus light ochraceous to deep ochraceous.

Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length a little over one-third entire median length, striate radially, lateral margins converging basally, disk elevated above eyes; ocelli small, situated anteriorly; eyes large, occupying over two-thirds entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent in ♀, somewhat obscure in ♂, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, excised along lateral margins near antennal sockets, without median longitudinal carina, somewhat depressed subapically, surface finely granulose; finely rugulose along anterior third; clypellus with lateral margins constricted medially, expanded apically.

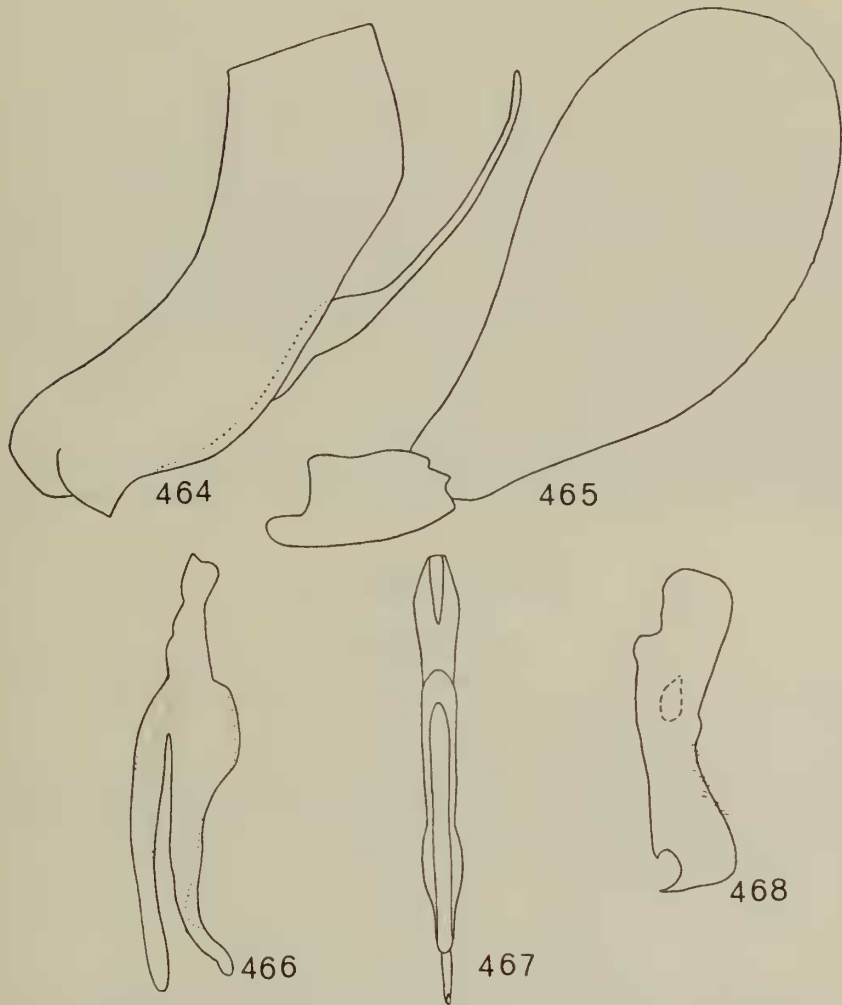
Male pygofer in lateral aspect with long, slender, curved process arising from caudoventral margin, process with lateral margins broad basally, narrowed and attenuated along apical three-fourths, almost needle-like; aedeagus in lateral aspect with dorsal appendage broad at basal half, narrowed at apical half, apex slightly curved dorsad, without spines or flanges; ventral appendage long, broad, tube-like, apex reaching apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with distal segment elongate, lateral margins broadly expanded medially.

Female seventh sternum with posterior margin produced medially.

DISTRIBUTION. Previously known from the Society Islands (Tahiti), and now recorded from the Austral Islands, Cook Islands and Pitcairn Island.

SPECIMENS EXAMINED.

Jassus tahitiensis Osborn, holotype ♀, SOCIETY Is.: Tahiti, Papeari, 9.ix.1929 (Adamson) (BPBM, Honolulu). *Jassus insularis* Osborn, holotype ♂ [not female as stated by Osborn, 1934a: 117], SOCIETY Is.: Tahiti, Fantana Valley, 1500 ft,



FIGS 464-468. *Tharra tahitiensis* (Osborn). 464, male pygofer, lateral view; 465, plate, lateral view; 466, aedeagus, lateral view; 467, aedeagus, dorsal view; 468, style, lateral view.

11.ix.1928 (*Adamson*) (BPBM, Honolulu); paratype ♂ [not female as stated by Osborn, 1934a : 118], SOCIETY Is.: Tahiti, Papara, 750 ft, 21.xii.1928 (*Adamson*) (BPBM, Honolulu).

SOCIETY Is.: Tahiti, Mt Ariaorai, N.W. Ridge, 400 m, native vegetation, collected on *Weinmannia parviflora*, 1 ♂, 11.vii.1961 (*J. L. Gressitt*); Tahiti, 1 ♂, v. 1927 (*L. H. MacDaniels*) (BPBM, Honolulu); Tahiti, Hitiaa, 1 ♀, 9.vii.1925 (*Cheesman*); Tahiti, Fautaua R., 1 ♂, 1 ♀, 17.x.1961 (*J. F. G. Clarke*). AUSTRAL Is.: S.W. slope Mt Manureva, 1000 ft, 2 ♂, 26.viii.1934 (*E. C. Zimmerman*); Rurutu I., S.W. slope, Mt Manureva, 1100 ft, collected from *Metrosideros*, 2 ♀, 29.viii.1934 (*E. C. Zimmerman*); Tubuai I., S.W. ridge, Mt Taita, 1200 ft, 1 ♀, 23.viii.1934 (*E. C. Zimmerman*); Rurutu I., S. slope, Mt Teape, 700 ft, 1 ♀, 2.ix.1934 (*E. C. Zimmerman*).

COOK IS.: Atiu, 1 ♂, 28-29.v.1965 (*G. W. Ramsey*) (DSIR, Nelson). PITCAIRN I.: Henderson Field, collected from *Asplenium nitidus*, 1 ♀, 13.vi.1934 (*D. Anderson*).

The examination of the holotype female of *Jassus tahitiensis* and the holotype male [*nec* ♀] of *Jassus insularis* resulted in the association of these sexes as the same species, *tahitiensis* being the valid name by priority by pagination. Metcalf (1964: 68) proposed a new name *osborni* for *Jassus insularis* Osborn, 1934, which was preoccupied by *Coelidia insularis* Matsumura, 1914 at the time Metcalf transferred this species to the genus *Coelidia*. However, *insularis* Osborn does not belong in the genus *Coelidia* and has been transferred to the genus *Tharra*.

BIOLOGY. This species has been collected from a number of host plants listed above from the Tahiti Islands. Collection records indicate that the species is prevalent in July and August.

REMARKS. The nearest relative of *tahitiensis* is *ochracea* and the former species can be separated by the presence of a needle-like pygofer process and by the ventral appendage of the aedeagus whose apex reaches the apex of the dorsal appendage.

Tharra hackeri Evans

(Text-figs 469-473)

Tharra hackeri Evans, 1966: 189. Holotype ♂, AUSTRALIA: Queensland National Park (SAM, Sydney).

Length: ♂ 4.90-5.10 mm, ♀ 5.30-5.70 mm.

General colour light fuscous. Crown rufofuscous; eyes deep fuscous; pronotum and scutellum rufofuscous; elytra rufofuscous, deep fuscous apically; clypeus and clypellus rufofuscous.

Head narrower than pronotum; crown short, produced distally beyond anterior margin of eyes, distal length about one-third entire median length; striate radially with short, median longitudinal carina, lateral margins nearly parallel, disk elevated above eyes; ocelli small, situated anteriorly; eyes moderate size, occupying a little over half entire dorsal area of head; pronotum large, median length greater than median length of crown, surface finely knobbed; scutellum large, median length about equal to median length of pronotum; elytra elongate, veins somewhat obscured, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, lateral margins somewhat constricted at antennal sockets, without median longitudinal carina, surface finely granulose, rugulose along anterior margin; clypellus with lateral margins slightly concave.

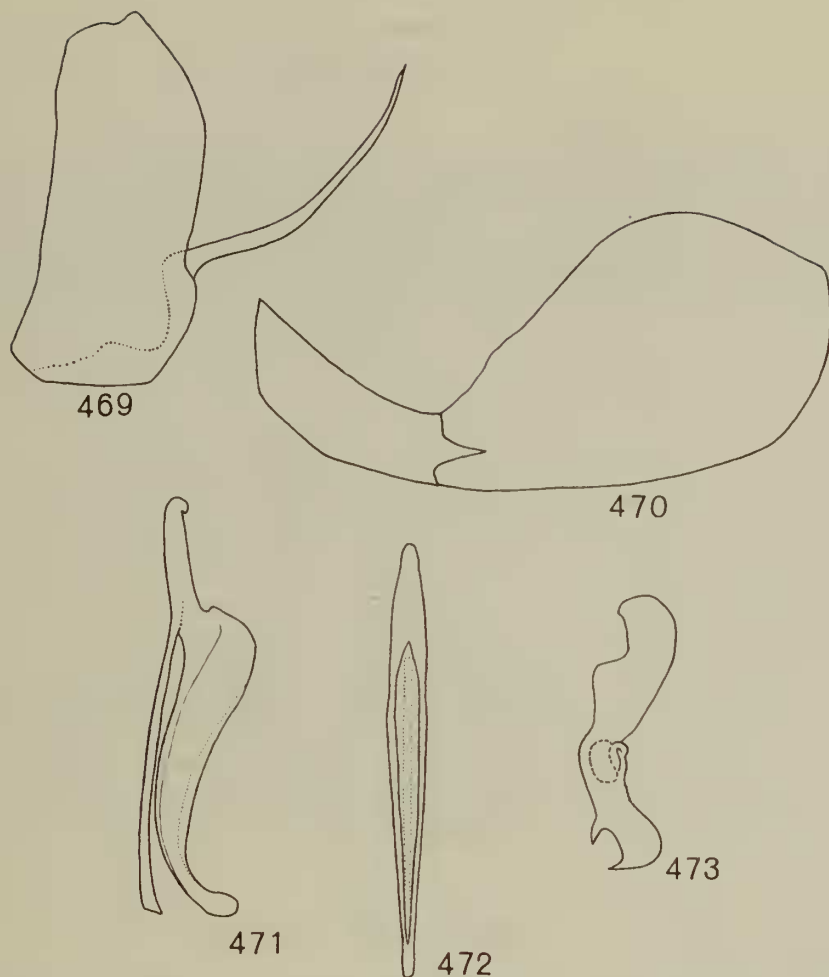
Male pygofer in lateral aspect with long, slender, narrow process arising from caudodorsal margin, process with lateral margins nearly equidistant throughout, slightly broader basally, pointed apically; aedeagus in lateral aspect with dorsal appendage broad at basal three-fourths, slightly curved and constricted subapically, without spines or flanges; ventral appendage long, tube-like, truncate apically, apex reaching apex of dorsal appendage; gonopore apical; connective Y-shaped; style clawed apically; plate with distal segment long, dorsal margin somewhat expanded.

Female seventh sternum with posterior margin produced medially.

DISTRIBUTION. Australia.

SPECIMENS EXAMINED.

AUSTRALIA: S.E. Queensland, Mt Glorious, 600 m, rain forest, 30 ♂, 19 ♀, 28.ii.-6.iii.1961 (*L. & M. Gressitt*); Mt Glorious, 1 ♂, 1 ♀, 26.xii.1928 (*H. Hacker*); Mt Gipps, 3 ♂, 1.ix.1931



FIGS 469-473. *Tharra hackeri* Evans. 469, male pygofer, lateral view; 470, plate, lateral view; 471, aedeagus, lateral view; 472, aedeagus, dorsal view; 473, style, lateral view.

(*H. Hacker*); Maleny, Queensland, 1 ♂, 1.x.1929 (*H. Hacker*); Brookfield, 2 ♀, 24.iii.1929 (*H. Hacker*); Woogaroo, 1 ♀, 1.iii.1927 (*H. Hacker*); Southport, 1 ♀, 26.i.1929 (*H. Hacker*); Canondale, 1 ♂, 1 ♀, 4.i.1930 (*H. Hacker*); Whianstate Forest nr Lismore, N.S.W., 2 ♂, 25.iii.1965 (*McAlpine & Loggin*).

The holotype male of *Tharra hackeri* has not been examined. I have based my interpretation of the species on material received from Dr J. W. Evans, author of the species.

BIOLOGY. Unknown.

REMARKS. From *labena*, to which it is similar in general habitus, *hackeri* can be separated by the absence of a flange on the dorsal appendage of the aedeagus and the broad plate.

Tharra flavocosta sp. n.

(Text-figs 474-478)

Length: ♂ 4.70 mm, ♀ unknown.

General colour testaceous with ivory or yellow band along costal area of elytra and a broad ivory or yellow band extending from the anterior margin of the middle of the pronotum distad to the apex of the elytra. Crown deep testaceous; eyes fuscous; pronotum testaceous along each lateral side of pronotum, yellow triangular area anterior to posterior border; scutellum with lateral angles fuscous to testaceous, broad yellow band medially; elytra fuscous to testaceous with a broad yellow or ivory band along costal area and another broad yellow-ivory band extending from the anterior margin of the clavus to the posterior margin of the elytra; clypeus and clypellus testaceous; lora and genae yellow.

Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length slightly over one-third entire median length, striate radially, slightly depressed medially, slightly carinate laterally, disk elevated considerably above level of eyes; ocelli small, situated anteriorly; eyes large, somewhat elongate, occupying nearly two-thirds of entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, lateral margins somewhat excised near middle near antennal sockets, anterior half angled in ventral view giving appearance of a median longitudinal carina along middle, surface finely granulose, broadly rugulose along anterior margin; clypellus with lateral margin expanded distally.

Male pygofer in lateral aspect with broad, short, curved process arising from near middle of caudal margin, process with lateral margins very broad basally, becoming attenuated and tapered apically; aedeagus in lateral aspect with dorsal appendage broad at basal half, becoming attenuated apically, constricted subapically, slightly expanded apically and curved caudodorsally, without spines or flanges; ventral appendage long, tube-like, somewhat expanded apically, extending beyond apex of dorsal appendage; gonopore apical; connective Y-shaped; style typically clawed apically; plate with distal segment elongate, narrow, dorsal margin expanded medially.

SPECIMENS EXAMINED.

Holotype ♂, SOLOMON Is.: Malaita, Auki, 2-20 m, 18.xi.1957 (*J. L. Gressitt*) (BPBM, Honolulu).

Paratype. SOLOMON Is.: S. Mala, Mukka, 1 ♂, 23.v.1934 (*R. A. Lever*) (BMNH, London).

BIOLOGY. Unknown.

REMARKS. This species is easily distinguished in general habitus by the long, transverse fuscous band with yellow transverse bands on either side.

Tharra dorsimacula (Walker) comb. n.

(Text-figs 479-483)

Coelidia dorsimacula Walker, 1870:314. Holotype ♀, NEW GUINEA (BMNH, London) [examined].

Coelidia roseifascia Walker, 1870:315. LECTOTYPE ♀, MOLUCCAS: Morotai (BMNH, London), here designated [examined]. **Syn. n.**

Coelidia selecta Walker, 1870:315. LECTOTYPE ♀, MOLUCCAS: Sula I. (BMNH, London), here designated [examined]. **Syn. n.**

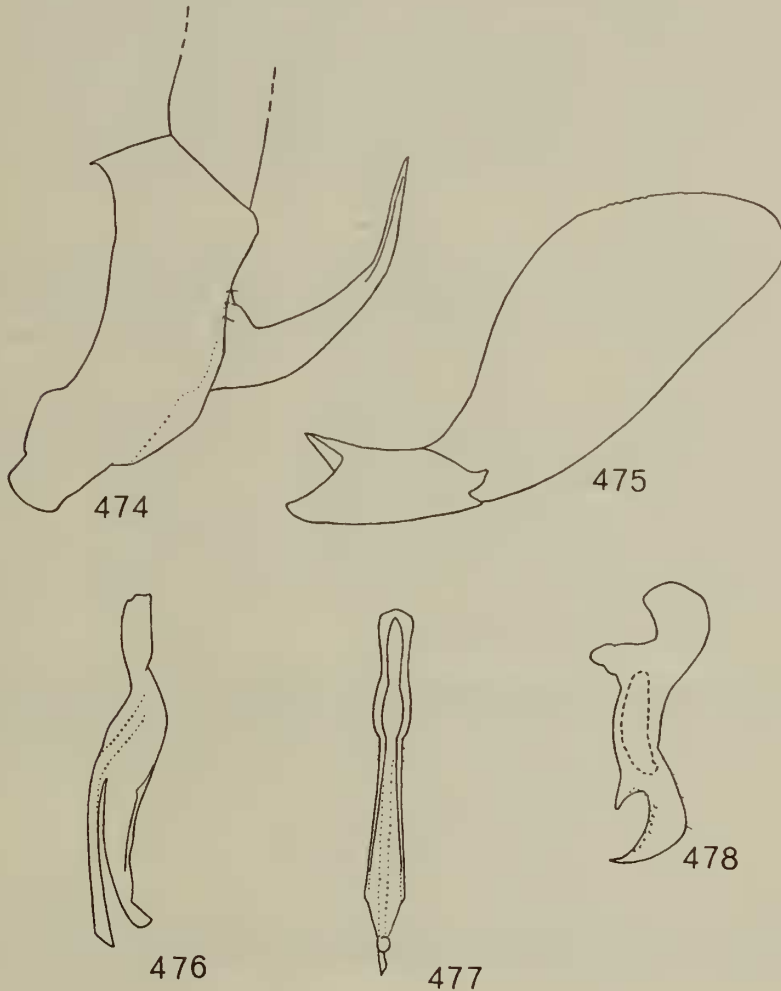
Coelidia dorsimacula Walker; Metcalf, 1964 : 47.

Coelidia roseifascia Walker; Metcalf, 1964 : 73.

Coelidia selecta Walker; Metcalf, 1964 : 73.

Length: ♂ 5.70–6.10 mm, ♀ 6.30–7.00 mm.

General colour light ochraceous to light fuscous in ♂, light fuscous to deep fuscous with ivory markings on elytra in ♀; sexual dimorphism apparent. Crown ochraceous with a narrow, rufous, transverse band along anterior margin; eyes ochraceous in ♂, fuscous in ♀; pronotum ochraceous to fuscous in ♂, ochraceous along middle, deep fuscous at lateral angles in ♀; scutellum pale ochraceous to light fuscous in ♂, ivory to pale ochraceous along middle and deep fuscous at lateral angles in ♀; elytra unicolorous ochraceous or fuscous in ♂, a large ivory or ochraceous spot on clavus and numerous ivory or ochraceous spots in cells in ♀; clypeus and clypellus ivory or ochraceous in both sexes.



FIGS 474–478. *Tharva flavocosta* sp. n. 474, male pygofer, lateral view; 475, plate, lateral view; 476, aedeagus, lateral view; 477, aedeagus, dorsal view; 478, style, lateral view.

Head considerably narrower than pronotum; crown produced distally beyond anterior margin of eyes, distal length slightly over one-third entire median length, striate radially, slightly depressed medially, lateral margins broadly convex basally, disk elevated considerably above level of eyes; ocelli large, situated anteriolaterally; eyes moderate size, occupying a little over half entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, without median longitudinal carina, lateral margins constricted at antennal sockets, surface finely granulose, rugulose along anterior margin; clypellus broad with lateral margins broadly concave medially.

Male pygofer in lateral aspect with long, curved process arising from caudoventral margin, process with lateral margins broad throughout at basal two-thirds, tapered at apical third, apex sharply pointed, outer lateral margin sinuate at apical third; aedeagus in lateral aspect simple with dorsal appendage broad at basal three-fourths, narrowly attenuated at apical fourth, apex curved dorsad, without processes or flanges; ventral appendage narrow, tube-like, closely appressed dorsally to dorsal appendage, apex somewhat expanded, reaching or extending slightly beyond apex of dorsal appendage; gonopore apical; connective Y-shaped; style hooked apically; plate with distal appendage elongate, lateral margins slightly expanded subapically.

Female seventh sternum with posterior margin truncate, or nearly so.

DISTRIBUTION. Raja Ampat Islands, Moluccas, New Guinea.

SPECIMENS EXAMINED.

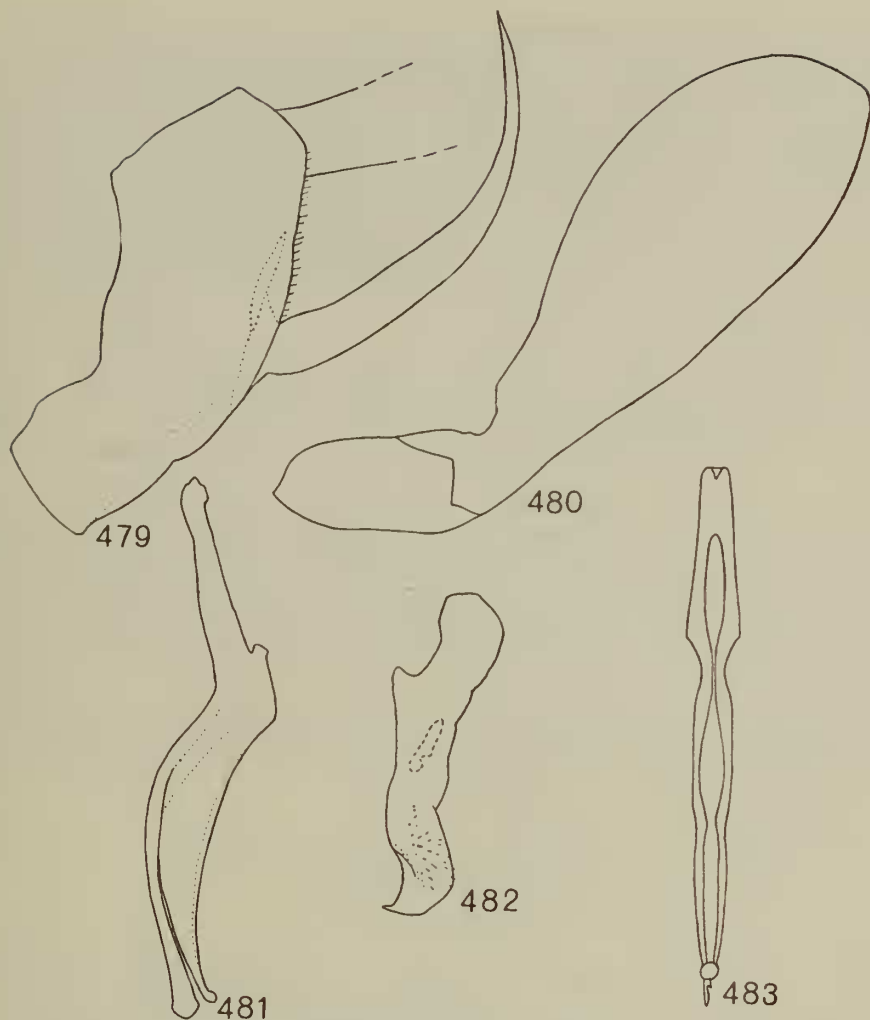
Coelidia dorsimacula Walker, holotype ♀, NEW GUINEA (*Wallace*) (BMNH, London).
Coelidia roseifascia Walker, lectotype ♀, MOLUCCAS: Morotai (*Wallace*) (BMNH, London).
Coelidia selecta Walker, lectotype ♀, MOLUCCAS: Sula I. (*Wallace*) (BMNH, London).

MOLUCCAS: Ambon, 15 ♂, 14 ♀ (*F. Muir*). NEW GUINEA: Waris, S. of Hollandia, 450–500 m, 12 ♂, 25 ♀, 1–17.viii.1959 (*T. C. Maa*); Bodem, 100 m, 11 km S.E. of Oerberfaren, 15 ♂, 12 ♀, 7–17.vii.1959 (*T. C. Maa*); Hollandia area, Mt Sentani, Cyclops Mts, 150–250 m, 2 ♂, 3 ♀, 16–25.vi.1959 (*J. L. Gressitt*); Ifar, 300–600 m, 2 ♂, 3 ♀, 22–23.vi.1959 (*T. C. Maa*); Genjam, 40 km W. of Hollandia, 100–200 m, 9 ♀, 1–10.iii.1960 (*T. C. Maa*); Maprik, 160 m, 6 ♀, 29.xii.1959–17.i.1960 (*T. C. Maa*); Vogelkop, Kebar Valley, W. of Manokwari, 550 m, 2 ♀, 4–31.i.1962 (*L. W. Quate*); Papua, Daradae Plain, 500 m, 80 km from Pt Moeresby, 3 ♀, 5.ix.1959 (*T. C. Maa*); Biak I., Kampong, Landbouw, 50–100 m, 2 ♀, 27.v.1959 (*T. C. Maa*); Amok, 165 m, 3 ♀, 6.i.1960 (*T. C. Maa*); Eramboe, 80 km from Merauke, 2 ♂, 1.ii.1960 (*T. C. Maa*); Cyclops Mts, Sabron, 130 ft, 3 ♀, iv. 1936 (*L. E. Cheesman*).

The holotype female of *Coelidia dorsimacula* Walker was examined and compared with the lectotypes of *Coelidia roseifascia* Walker and *Coelidia selecta* Walker. I found that the latter two species are identical with *dorsimacula*, which is the valid name by priority by pagination.

BIOLOGY. Unknown. Collection records indicate that this species is common from January to August in New Guinea.

REMARKS. This species is similar in general habitus to *villicaris* but can be separated from that species by the simple aedeagus without processes, spines or flanges on the dorsal appendage.



FIGS 479-483. *Tharra dorsimacula* (Walker). 479, male pygofer, lateral view; 480, plate, lateral view; 481, aedeagus, lateral view; 482, style, lateral view; 483, aedeagus, dorsal view.

***Tharra testacea* (Walker) comb. n.**

(Text-figs 484-488)

Coelidia testacea Walker, 1870 : 315. Holotype ♂, MOLUCCAS: Sula I. [labelled "Sula", although Walker gives "Mysol" as the type-locality] (BMNH, London) [examined].

Jassoidula niuensis Osborn, 1934a : 183. Holotype ♀, SAMOA (BPBM, Honolulu) [examined].

Syn. n.

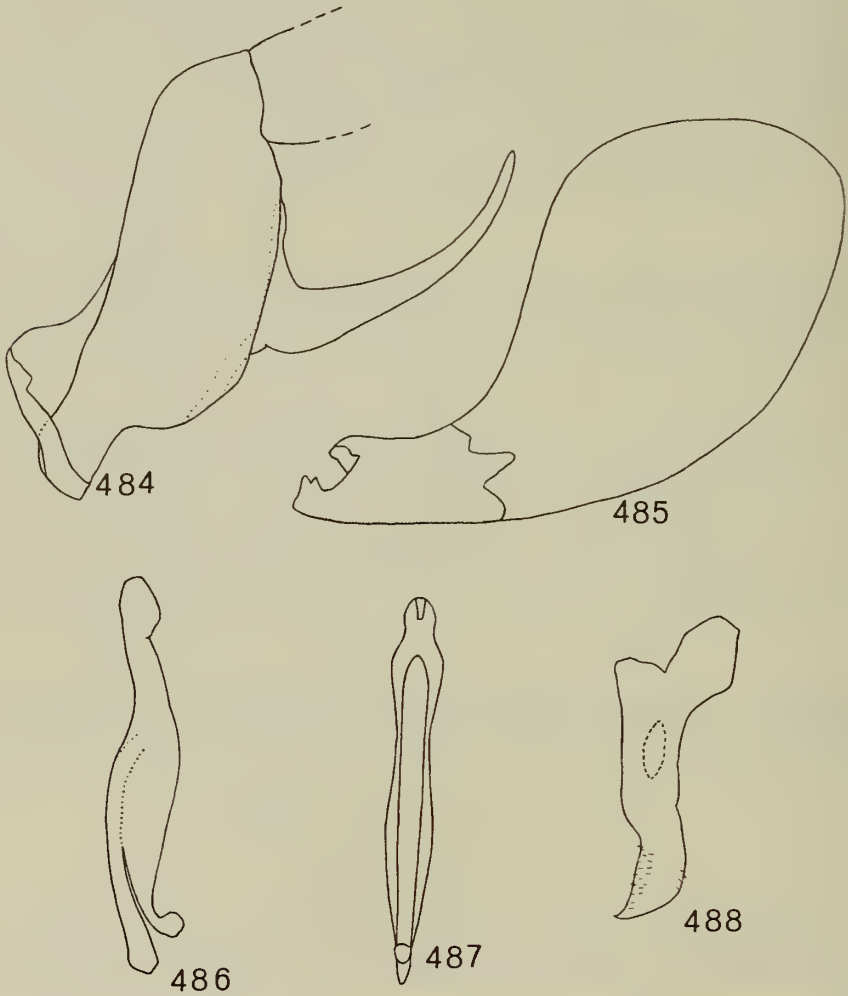
Jassoidula niuensis Osborn; Metcalf, 1964 : 83.

Length: ♂ 5.10-5.30 mm, ♀ 5.90-6.10 mm.

General colour light ochraceous to light fuscous. Crown ochraceous; eyes fuscous; pronotum

and scutellum ochraceous to light fuscous; elytra ochraceous with a narrow fuscous subapical band in ♂, two fuscous subapical bands in ♀; clypeus and clypellus ochraceous.

Head narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, lateral margins parallel, disk elevated above level of eyes; ocelli small, situated anteriorly; eyes moderate size, occupying a little over half entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus elongate, anterior margins broad, lateral margins narrowed posteriorly, excised slightly at middle near antennal sockets, without median longitudinal carina, surface finely granulose, narrowly rugulose along anterior margin; clypellus with lateral margin slightly constricted medially, expanded apically.



FIGS 484-488. *Tharra testacea* (Walker). 484, male pygofer, lateral view; 485, plate, lateral view; 486, aedeagus, lateral view; 487, aedeagus, dorsal view; 488, style, lateral view.

Male pygofer in lateral aspect with long, curved process arising from caudoventral margin, process very broad basally, becoming attenuated throughout and slightly pointed apically; aedeagus in lateral aspect with dorsal appendage broad at basal three-fourths, narrowly constricted subapically, somewhat bulbous apically, without spines or flanges; ventral appendage short, somewhat tube-like, expanded apically and extending beyond apex of dorsal appendage; gonopore apical; connective Y-shaped; style broadly hooked apically; plate with distal segment somewhat elongate, bulbous subapically.

Female seventh sternum with posterior margin produced medially.

DISTRIBUTION. Samoa Islands, Moluccas (Sula I.).

SPECIMENS EXAMINED.

Coelidia testacea Walker, holotype ♂, MOLUCCAS: Sula I. (Wallace) (BMNH, London). *Jassoidula niuensis* Osborn, holotype ♀, allotype ♂, SAMOA: Niue, Savage Island, 6.viii.1918 (Kellers) (BPBM, Honolulu). *Jassoidula niuensis* Osborn, paratypes, 5 ♂ and 4 ♀, same data as holotype (USNM, Washington).

SAMOA: Niue, Savage Island, 6 ♂, 1 ♀, 6.viii.1918 (H. C. Kellers).

Dissection and examination of the male genitalia of the holotype of *testacea* Walker and allotype of *niuensis* Osborn showed that the two species were identical. Proper association of the sexes of the holotype female and allotype male were made.

BIOLOGY. Unknown. Collection records indicate that the species is prevalent in August.

REMARKS. This species is very similar in general habitus to *lenta* but can be separated from that species by the presence of the curved, tapered pygofer process.

Tharra nigroides sp. n.

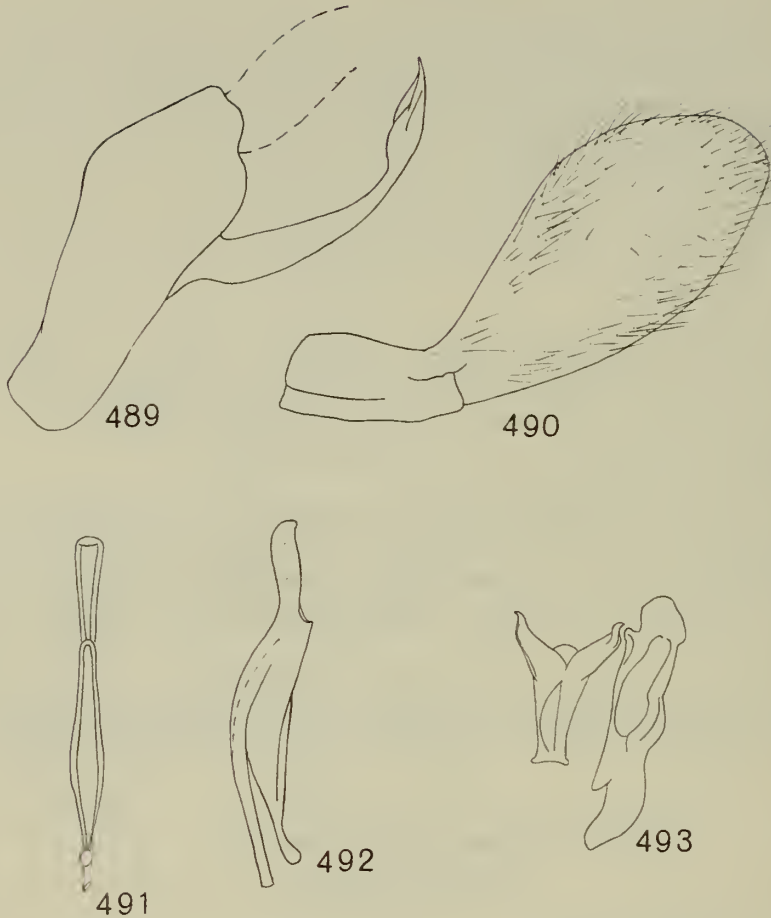
(Text-figs 489-493)

Length: ♂ 3.90 mm, ♀ unknown.

General colour testaceous. Crown ochraceous; eyes rufous; pronotum, scutellum and elytra testaceous; clypeus and clypellus testaceous.

Head slightly narrower than pronotum; crown short and narrow, produced slightly beyond anterior margin of eyes, distal length about one-fourth entire median length, striate radially, lateral margins converging basally, disk elevated slightly above level of eyes; ocelli small, situated anteriorly; eyes large, somewhat globular, occupying over two-thirds entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum small, median length about equal to median length of pronotum; elytra elongate, veins somewhat obscured, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, without median longitudinal carina, surface granulate at apical half, rugulose at basal half; clypellus with lateral margins divergent apically.

Male pygofer in lateral aspect with long, curved twisted process arising from near middle of caudal margin, process with lateral margins somewhat broad basally, becoming attenuated and constricted subapically, then bulbous subapically and narrowly pointed apically with a few striations subapically; aedeagus in lateral aspect with dorsal appendage broad at basal half, narrowly attenuated and constricted subapically, slightly bulbous apically, curved caudodorsally, without spines or flanges; ventral appendage narrow, tube-like, long, extending



FIGS 489-493. *Tharra nigroides* sp. n. 489, male pygofer, lateral view; 490, plate, lateral view; 491, aedeagus, dorsal view; 492, aedeagus, lateral view; 493, style and connective, dorsolateral view.

slightly beyond apex of dorsal appendage; gonopore apical; connective Y-shaped; style typically clawed apically; plate with distal segment elongate, dorsal margin expanded medially.

SPECIMENS EXAMINED.

Holotype ♂, SOLOMON Is.: Bougainville, Boku, 4-6.vi.1956 (*J. L. Gressitt*) (BPBM, Honolulu).

BIOLOGY. Unknown.

REMARKS. This species is similar in general habitus to many other small, dark species, but can be separated from them by the elongate male plate.

Tharra lutea (Montrouzier) comb. n.

(Text-figs 494-498)

Coelidia lutea Montrouzier, 1861 : 73. LECTOTYPE ♂, LOYALTY IS.: Lifou (NM, Vienna), here designated [examined].

assoidula pallida Osborn, 1934a : 187. Holotype ♀, TONGA (BMNH, London) [examined].

Syn. n.

Coelidia lutea Montrouzier; Metcalf, 1964 : 58.

Jassoidula pallida Osborn; Metcalf, 1964 : 83.

Length: ♂ 5.10-5.40 mm, ♀ 5.70-6.00 mm.

General colour light to deep ochraceous. Crown deep ochraceous sometimes with light orange to rufous longitudinal marking below ocelli; pronotum light ochraceous to deep ochraceous; eyes deep ochraceous; scutellum light to deep ochraceous; elytra ochraceous with a small light fuscous spot midway between the commissural line and the apex of the elytra; clypeus and clypellus ochraceous.

Head narrower than pronotum; crown long and broad, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, lateral margins nearly parallel, disk elevated considerably above level of eyes; ocelli small, situated anteriorly; eyes moderate size, somewhat globular, occupying about half entire dorsal area of head; pronotum short, median length less than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins concolorous and slightly obscured, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, lateral margins constricted medially near antennal sockets, without median longitudinal carina, surface finely granulose, narrowly rugulose along anterior margin; clypellus with lateral margins nearly parallel, slightly expanded apically.

Male pygofer in lateral aspect with broad, curved process arising from caudoventral margin, process with lateral margins nearly equidistant but somewhat sinuate basally, apex slightly curved and abruptly pointed with numerous oblique striations, apex twisted; aedeagus in lateral aspect with dorsal appendage narrowed throughout except for subapical constriction, apex broadly expanded, without spines or flanges; ventral appendage rather broad, tube-like, expanded apically and extending considerably beyond apex of dorsal appendage; gonopore apical; style clawed apically; plate with distal segment elongate, dorsal margins expanded.

Female seventh sternum with posterior margin produced medially.

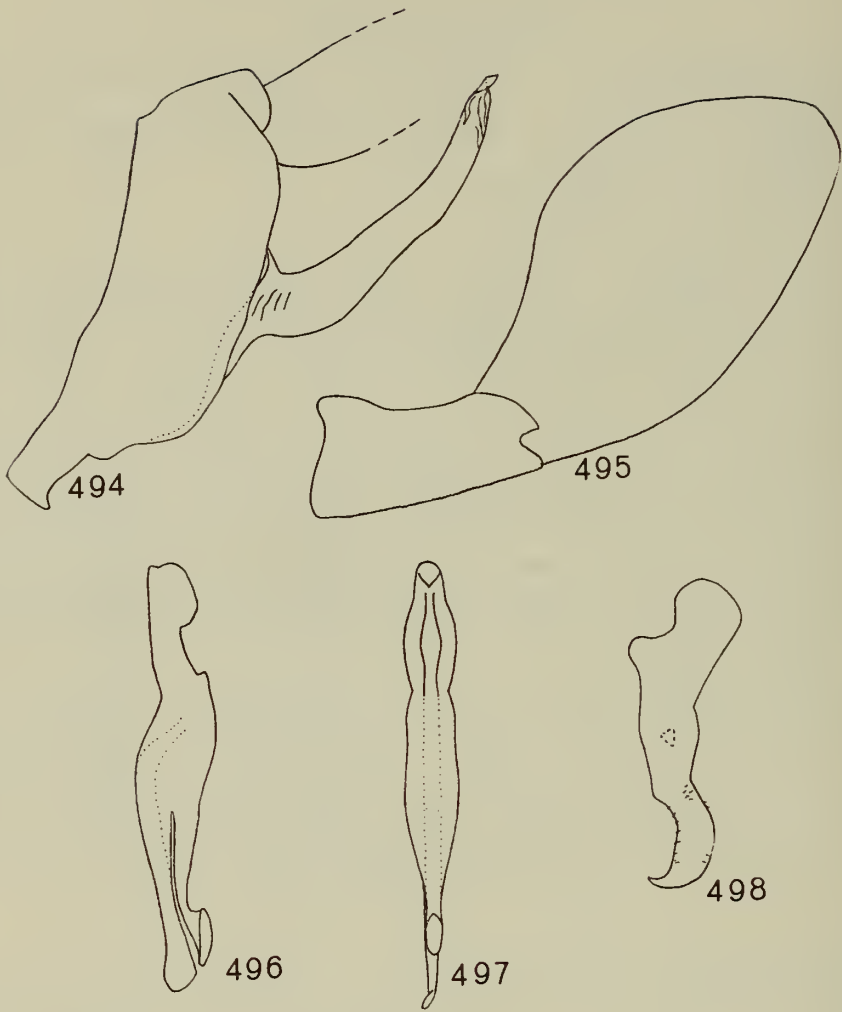
DISTRIBUTION. Tonga Islands, Loyalty Islands (Lifou), New Hebrides.

SPECIMENS EXAMINED.

Coelidia lutea Montrouzier, a single specimen with abdomen missing, probably a male, labelled 'Lifu' (NM, Vienna), here designated lectotype male of *Coelidia lutea* Montrouzier. *Jassoidula pallida* Osborn, holotype ♀, TONGA: Hopai, 26.ii.1925 (*Buxton & Hopkins*) (BMNH, London).

LOYALTY IS.: Lifou Island, We, 7 ♂, 3 ♀, 30-31.i.1962 (*N. L. H. Krauss*). TONGA: Tongatavu Island, Nukualofa, 2 ♂, 6 ♀, ii. 1956 (*N. L. H. Krauss*). SAMOA: Manua, Tau, E. of Tau Village (Luma), 50-200 m, 1 ♂, 16.ii.1965 (*G. A. Samuelson*). NEW HEBRIDES: Aneityum, Red Crest, 1200 ft, 3 miles N.E. of Anelgauhata, 4 ♂, 10 ♀, v-vi.1955 (*L. E. Cheesman*); Santo, 9 ♂, 3 ♀, viii. 1929 (*L. E. Cheesman*); Erromanga, 6 ♂, viii. 1930 (*L. E. Cheesman*); Malekuala, 1 ♂, 4 ♀, i.-vi. 1930 (*L. E. Cheesman*); Banks I., Vanua Lava, 1 ♂, 2 ♀, x. 1929 (*L. E. Cheesman*).

Examination of the type-material of *lutea* Montrouzier and *pallida* Osborn reveals that these two species are synonymous; *lutea* is the oldest and therefore the valid name. Although Montrouzier labelled his specimen '*lutea*' in the genus



FIGS 494-498. *Tharra lutea* (Montrouzier). 494, male pygofer, lateral view; 495, plate, lateral view; 496, aedeagus, lateral view; 497, aedeagus, dorsal view; 498, style, lateral view.

'*Cercopis*', he provisionally assigned the species to the genus *Coelidia* in his original description.

BIOLOGY. Unknown.

REMARKS. This species is similar in some genital aspects to *ogygia* but can be separated from that species by the pygofer process which is acutely twisted apically.

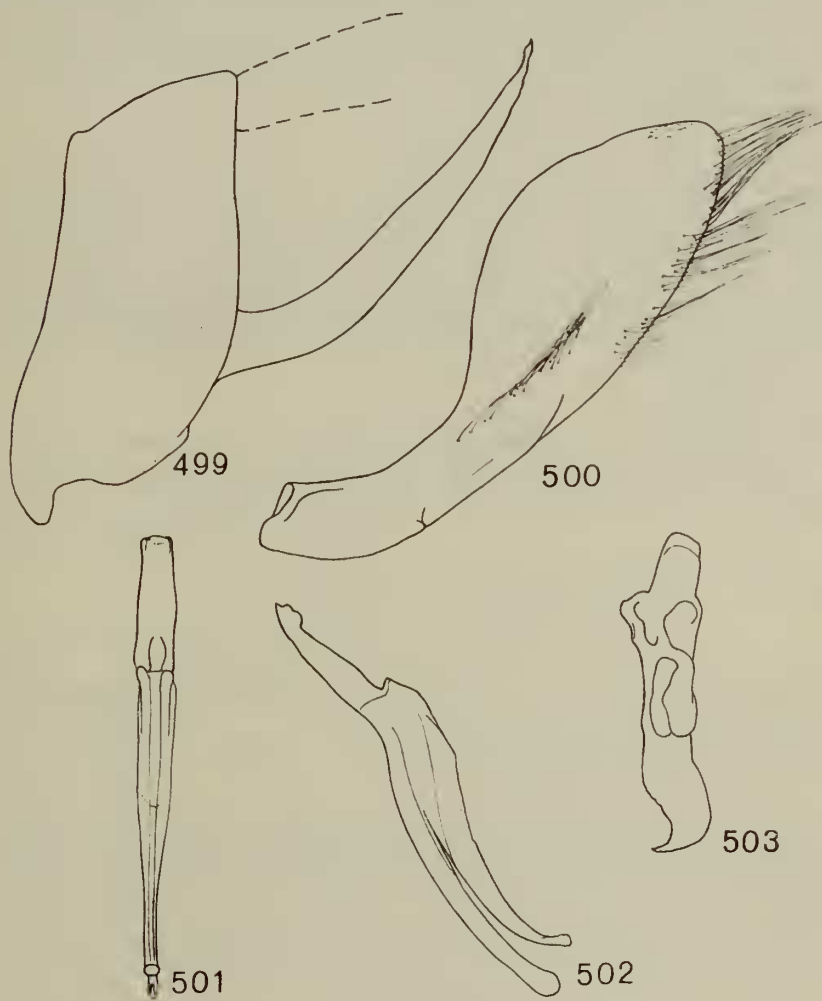
Tharra lamma sp. n.

(Text-figs 499-503)

Length: ♂ 5.70-6.00 mm, ♀ 6.00 mm.

General colour ochraceous in ♂, fuscous in ♀; sexual dimorphism apparent. Crown ochraceous to fuscous; eyes light ochraceous to deep fuscous; pronotum ochraceous to deep fuscous; scutellum ochraceous to light fuscous; elytra ochraceous in ♂, fuscous in ♀, with a deep fuscous to testaceous band along the apical margin in ♂, several light ochraceous spots along the elytra of the ♀; clypeus ochraceous with a light orange band across the anterior margin in both sexes; clypellus ochraceous.

Head considerably narrower than pronotum; crown long and narrow, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially,



FIGS 499-503. *Tharra lamma* sp. n. 499, male pygofer, lateral view; 500, plate, lateral view; 501, aedeagus, dorsal view; 502, aedeagus, lateral view; 503, style, lateral view.

slightly carinate laterally, slightly depressed medially, lateral margins somewhat convergent basally, disk elevated considerably above level of eyes; ocelli small, situated anteriolaterally; eyes moderate size, semiglobular, occupying about two-thirds entire dorsal area of head; pronotum moderate size, median length about equal to median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, lateral margins prominently excised at middle near antennal sockets, without median longitudinal carina, surface finely granulose, narrowly rugulose along anterior margin; clypellus with lateral margins expanded apically.

Male pygofer in lateral aspect with long, rather broad process arising from caudoventral margin, process broad basally, becoming evenly attenuated apically, apical third slightly sinuate along outer lateral margin; aedeagus in lateral aspect with dorsal appendage broad at basal half, becoming attenuated apically, slightly constricted subapically and curved caudodorsally, without flanges or spines; ventral appendage long, tube-like throughout, slightly extending beyond apex of dorsal appendage and slightly expanded apically; gonopore apical; style clawed apically; plate with distal segment elongate, over twice as long as wide, dorsal margin expanded medially.

Female specimen with abdomen missing.

SPECIMENS EXAMINED.

Holotype ♂, NEW GUINEA: Sepik, Angoram, 20–80 m, 14–16.viii.1969 (*J. L. Gressitt*) (BPBM, Honolulu).

Paratypes. NEW GUINEA: allotype ♀, W. Highlands, Kubor Range, 2950 m, 22.v.1966 (*J. L. Gressitt*) (BPBM, Honolulu); 1 ♂, same data as holotype (BPBM, Honolulu); 4 km W. of Green River, post, 200 m, 1 ♂, 29.vi.1963 (*R. Straatman*) in author's collection.

BIOLOGY. Unknown.

REMARKS. This species is similar in general habitus to *atriceps* but can be separated from that species by the long, blade-like pygofer process with its apical serrate margin.

Tharra oxyomma (Kirkaldy) comb. n.

(Text-figs 504–506)

Muirella oxyomma Kirkaldy, 1907 : 79. Holotype ♂, FIJI (BPBM, Honolulu) [examined].

Muirella oxyomma Kirkaldy; Linnavuori, 1960b : 31.

Muirella oxyomma Kirkaldy; Metcalf, 1964 : 22.

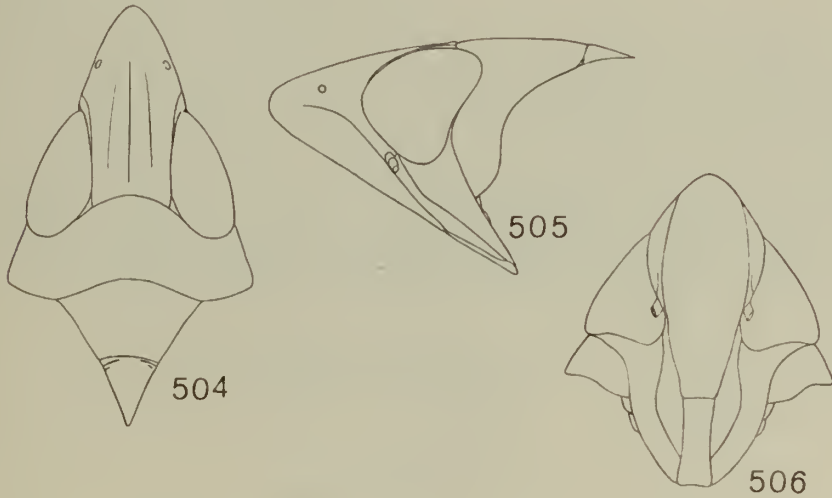
Length: ♂ 6.00 mm, ♀ 5.90–6.40 mm.

General colour ochreous with red longitudinal vittae on crown and brown chevron markings on elytra. Crown with broad suffused red longitudinal vitta on each side of middle, yellow ochre medially; eyes reddish brown; pronotum and scutellum light ochre to light brown; elytra deep ochre with two brown discontinuous chevron stripes, one across middle of clavus, the other below, small brown spot subapically on appendix, sometimes continuing below, apex with narrow brown band; clypeus ochre with narrow very light ochraceous band anteriorly, bordered by narrow brown to fuscous band below; clypellus light brown (description from females).

Head narrower than pronotum; crown produced distally beyond anterior margin of eyes, distal length over half entire median length, striate radially, slightly depressed medially, lateral margins nearly parallel, disk elevated above eyes; ocelli small, situated laterally; eyes moderate

size, occupying less than half of the entire dorsal area of the head; pronotum short, median length less than median length of crown; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, venation as in generic description, appendix well developed; clypeus long, very broad anteriorly, narrowed distally, slightly concave in lateral aspect, with short, obscure median longitudinal carina anteriorly, surface rugulose along anterior margin, finely granulose below; clypellus with lateral margin narrow basally, slightly divergent apically.

Female seventh sternum with posterior margin produced medially. No males were available for illustration and description of the genitalia.



FIGS 504-506. *Tharva oxyomma* Kirkaldy. 504, head, pronotum and scutellum, dorsal view; 505, same, lateral view; 506, face.

DISTRIBUTION. Fiji Islands.

SPECIMENS EXAMINED.

Muirella oxyomma Kirkaldy, holotype ♂, FIJI: Viti Levu, Rewa (*F. Muir*) (BPBM, Honolulu).

FIJI: Rewa, 4 ♀, iii. 1906 (*F. Muir*); Navua, 2 ♀, ii. 1906 (*F. Muir*); 1 ♀, Lami, Viti Levu, iv. 1951 (*N. L. H. Krauss*), 2 ♀, Tholo-l-Suva, Viti Levu, iv. 1951 (*N. L. H. Krauss*).

BIOLOGY. Unknown. Collections were made from February to April.

REMARKS. Since no males were available for illustration of the genitalia, characters of the female head can be used to separate the same sex of other long-headed species of the genus. *Tharva oxyomma* is most closely related to *frontalis* and can be separated from the latter by the concaved clypeus, longer crown and the presence of but obscured clypeal carina.

Tharra kirkaldyi (Linnavuori) comb. n.

(Text-figs 507-509)

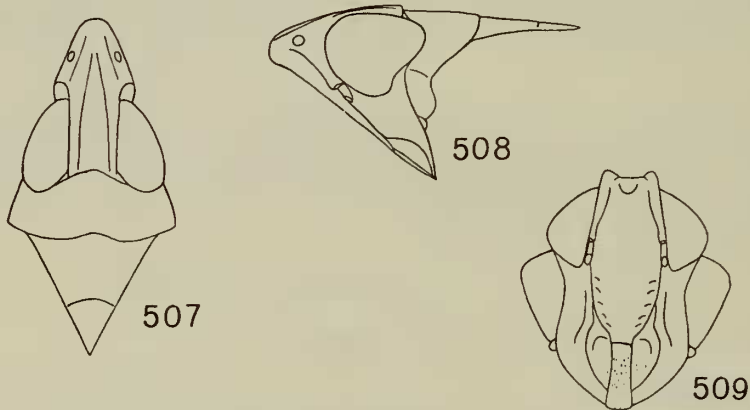
Muirella kirkaldyi Linnavuori, 1960b : 31. Holotype ♀, FIJI (BPBM, Honolulu) [examined].

Length: ♂ unknown, ♀ 6.00 mm.

General colour deep ochre with fuscous markings on crown, pronotum and apex of elytra. Crown yellow with two small fuscous spots apically, two large transverse spots below ocelli and two smaller fuscous spots next to the eyes; eyes dark brown; pronotum ochreous with two small fuscous spots anteriorly; scutellum ochreous; elytra deep ochre with two small fuscous spots on each side of apex of clavus, one large fuscous spot on first apical cell and a curved fuscous line across apical cells, extreme apex with narrow fuscous band; clypeus yellow with broad fuscous band subapically; small brown vittae laterally below; clypellus yellow.

Head narrower than pronotum; crown produced distally beyond anterior margin of eyes, distal length about half total median length, striate radially, strongly depressed medially, carinate laterally, lateral margins nearly parallel, disk elevated above eyes; ocelli small, situated laterally; eyes large, occupying over half entire dorsal area of head, compressed laterally; pronotum short, median length less than median length of crown; scutellum large, median length longer than median length of pronotum; elytra elongate, veins prominent, venation as in generic description, appendix well developed; clypeus long, broad at subapical half, narrowed at basal half, concave in lateral aspect, carina absent, surface finely granulose, rugulose on anterior margin; clypellus with lateral margins slightly divergent apically.

Female seventh sternum with posterior margin produced slightly at middle.



FIGS 507-509. *Tharra kirkaldyi* (Linnavuori). 507, head, pronotum and scutellum, dorsal view; 508, same, lateral view; 509, face.

DISTRIBUTION. Fiji Islands.

SPECIMENS EXAMINED.

Muirella kirkaldyi Linnavuori, holotype ♀, FIJI: Viti Levu, Lami, v. 1951 (N. L. H. Krauss) (BPBM, Honolulu).

FIJI: Viti Levu, Lami, 1 ♀, iii, 1951 (N. L. H. Krauss).

BIOLOGY. Unknown. Specimens were collected in March and April.

REMARKS. Males of this species are unknown, but the female of *kirkaldyi* can be separated from females of other long-headed species, particularly *oxyomma*, by the crown with prominent lateral carina and deeply recessed disk.

***Tharra vittata* (Montrouzier) comb. n.**

Coelidia vittata Montrouzier, 1861 : 73. LECTOTYPE ♀, LOYALTY Is.: Lifou (NM, Vienna), here designated [examined].

Jassus neoguttatus Distant, 1920 : 468. Holotype ♀, NEW CALEDONIA (BMNH, London) [examined]. **Syn. n.**

Coelidia vittata Montrouzier; Metcalf, 1964 : 80.

Coelidia neoguttata (Distant); Metcalf, 1964 : 61.

Length: ♂ unknown, ♀ 6.00–6.10 mm.

General colour deep ochraceous to deep fuscous. Crown deep ochraceous; eyes light rufous; pronotum deep ochraceous; scutellum light ochraceous with deep ochraceous on lateral angles; elytra with clavus deep ochraceous with pale spot on middle, remainder of elytra light ochraceous with pale apical cells.

Head narrower than pronotum; crown short and very broad, produced distally beyond anterior margin of eyes, distal length less than one-third entire median length, striae radially, slightly depressed medially, lateral margins slightly convex, disk elevated above level of eyes; ocelli small, situated anteriolaterally; eyes moderate size, somewhat globular, occupying less than one-third entire dorsal area of head; pronotum large, median length greater than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, appendix well developed, venation as in description of genus; clypeus elongate, broad anteriorly, narrowed posteriorly, lateral margins incised near antennal sockets, somewhat carinate above antennal sockets, without median longitudinal carina, surface finely granulose, broadly rugulose along anterior margin; clypellus with lateral margin expanded apically.

Female seventh sternum with posterior margin produced medially.

DISTRIBUTION. New Caledonia, Loyalty Islands.

SPECIMENS EXAMINED.

Coelidia vittata Montrouzier, lectotype ♀, LOYALTY Is.: Lifou (NM, Vienna).

Jassus neoguttatus Distant, holotype ♀, NEW CALEDONIA, 5.xii.1914 (*P. D. Montague*) (BMNH, London).

NEW CALEDONIA: Col d'Amieu, 650–800 m, 5 ♀, 21–23.iii.1968 (*T. C. Maa & J. L. Gressitt*); Mt des Koghis, 400–600 m, 4 ♀, i. 1969 (*N. L. H. Krauss*); Mt Panie trail, 1 ♀, 8–9.ii.1963 (*N. L. H. Krauss*); Bourail, 1 ♀, iii. 1959 (*N. L. H. Krauss*).

BIOLOGY. Unknown. Collection records indicate that this species is prevalent from January to March.

REMARKS. From *robusta*, to which it is similar, *vittata* can be distinguished by the very broad crown which is somewhat carinate laterally above antennal sockets.

***Tharra terminalis* (Walker) comb. n.**

Coelidia guttata Walker, 1870 : 313. Holotype ♀, RAJA AMPAT Is. (West Irian) (BMNH, London) [examined]. [Homonym of *Coelidia guttata* Walker 1851.] **Syn. n.**

Coelidia terminalis Walker, 1870 : 314. LECTOTYPE ♂, RAJA AMPAT Is. (West Irian) (BMNH, London), here designated [examined].

Coelidia sexguttata Walker, 1870 : 314. Holotype ♀, NEW GUINEA (BMNH, London) [examined].

Syn. n.

Coelidia sexguttata Walker; Metcalf, 1964 : 74. [List.]

Coelidia sexguttata var. *terminalis* Walker; Metcalf, 1964 : 74.

General colour testaceous; sexual dimorphism apparent.

Crown ochraceous; pronotum and scutellum testaceous; elytra uniformly testaceous in ♂, testaceous in ♀ with three large ochraceous spots on each elytron, two equidistant on costa and one on clavus.

Head narrower than pronotum; crown long and broad, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, lateral margins slightly concave, disk elevated above eyes; ocelli small, situated anteriorly; eyes moderate size, occupying nearly two-thirds entire dorsal area of head; pronotum with median length less than median length of crown; surface finely knobbed; scutellum large, median length greater than median length of pronotum, elytra elongate, veins prominent, appendix well developed, venation as in description of genus.

DISTRIBUTION. Raja Ampat and New Guinea (Walker, 1870).

SPECIMENS EXAMINED.

Coelidia guttata Walker, holotype ♀, RAJA AMPAT IS. (West Irian): Misoöl (Wallace) (BMNH, London). *Coelidia terminalis* Walker, lectotype ♂, RAJA AMPAT IS. (West Irian): Misoöl (Wallace) (BMNH, London). *Coelidia sexguttata* Walker, holotype ♀, NEW GUINEA (Wallace) (BMNH, London).

Coelidia guttata Walker, 1870 is preoccupied by *Coelidia guttata* Walker, 1851.

The next available name is *Coelidia terminalis* Walker, 1870 by priority by pagination. *Coelidia sexguttata* Walker, 1870 and *guttata* Walker, 1870 are both synonymous with *terminalis*.

REMARKS. The above description was based on the type-specimens. No illustrations were made since all abdomens were missing and no other material is available at this time.

***Tharra subapicalis* (Walker) comb. n.**

Coelidia subapicalis Walker, 1870 : 312. Holotype ♂, RAJA AMPAT IS. (West Irian) (BMNH, London) [examined].

Coelidia subapicalis Walker; Metcalf, 1964 : 76.

No description or illustration of this species was possible because the holotype male is badly damaged. Only the elytra and thorax remain. However, I am placing the species in the genus *Tharra* with some reservations. The specific identity is virtually impossible and any recourse must be attempted through Walker's original description, which is reproduced below.

'*Mas.* Nigra, elliptica, nitens, capite fascia flava, pectore pallide flavo, abdomine piceo, pedibus testaceis, femoribus anticis rufis, alis, anticis linea flava subobliqua.

Male. Black, elliptical, shining, very finely punctured. Head with a narrow yellow band in front of the eyes; this band is much dilated beneath. Pectus pale yellow. Abdomen piceous. Legs testaceous; fore femora bright red. Fore wings with a yellow line, which joins the costa at the base, and thence diverges slightly from it to the end of the hind border. Length of the body $1\frac{3}{4}$ lines, of the wings $3\frac{1}{2}$ lines.'

DISTRIBUTION. Raja Ampat Islands.

SPECIMEN EXAMINED.

Coelidia subapicalis Walker, holotype ♂, RAJA AMPAT IS. (West Irian): 'Mysol' [Misoöl] (Wallace) (BMNH, London).

HARANTHUS gen. n.

(Text-figs 510-514)

Type-species: *Haranthus pendiculus* sp. n.

Medium size leafhopper. General colour ochraceous with ivory spots on elytra.

Head distinctly narrower than pronotum; crown produced beyond anterior margin of eyes, disk elevated, slightly carinate laterally; ocelli near anterior margin; eyes large; pronotum very broad, scutellum large; elytra elongate, venation prominent, outer anteapical cell closed, five apical cells present, appendix very well developed; clypeus elongate, tumescent in lateral aspect with median longitudinal carina arising posteriorly and fading or weak at anterior half; clypellus short, margins parallel.

Male genitalia symmetrical; pygofer with single long process arising from caudoventral margin, aedeagus bipendulate with a pair of long processes on ventral appendage; gonoduct on ventral appendage; connective as in *Tharra* with short stem; style as in *Tharra* but not clawed apically; plate as in *Tharra*.

Haranthus is a monotypic genus. The genus has characters in common with *Tharra* and with a new genus (to be described in a later part of this revision) of Thagriini, and therefore may represent a phylogenetic link between the Tharrini and Thagriini. The genus is known only from New Guinea.

Haranthus pendiculus sp. n.

(Text-figs 510-514)

Length: ♂ 9.00 mm, ♀ unknown.

General colour ochraceous with numerous ivory spots on elytra. Crown ochraceous; eyes rufous; pronotum and scutellum deep ochraceous; elytra deep ochraceous with numerous, irregular ivory spots in cells; clypeus and clypellus light ochre.

Head considerably narrower than pronotum; crown long and broad, produced distally beyond anterior margin of eyes, distal length about one-third entire median length, striate radially, disk elevated above eyes, lateral margins slightly carinate and nearly parallel; ocelli situated near anterior margin; eyes large, occupying over half entire dorsal area of head, tumose laterally; pronotum long, median length greater than median length of crown, surface finely knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins prominent, venation typical of genus, appendix well developed; clypeus elongate, tumescent, lateral margins nearly parallel, slightly excised near antennal fossa, with median longitudinal carina arising posteriorly and becoming obscure anteriorly, surface finely granulose, narrowly rugulose along anterior margin; clypellus short, slightly tumid anteriorly, lateral margins parallel.

Male pygofer in lateral aspect with long prominent process arising from caudoventral margin, process with 2 short secondary processes, one subbasal and one subapical; aedeagus bipendulate; dorsal appendage narrow, equidistant throughout, curved dorsally at apex; ventral appendage with apex extending beyond apex of dorsal appendage, long, with two pairs of slender processes, the basal pair short and the distal pair long, each pair arising from dorsal margin; gonopore apical on ventral appendage; connective broadly Y-shaped with short stem;

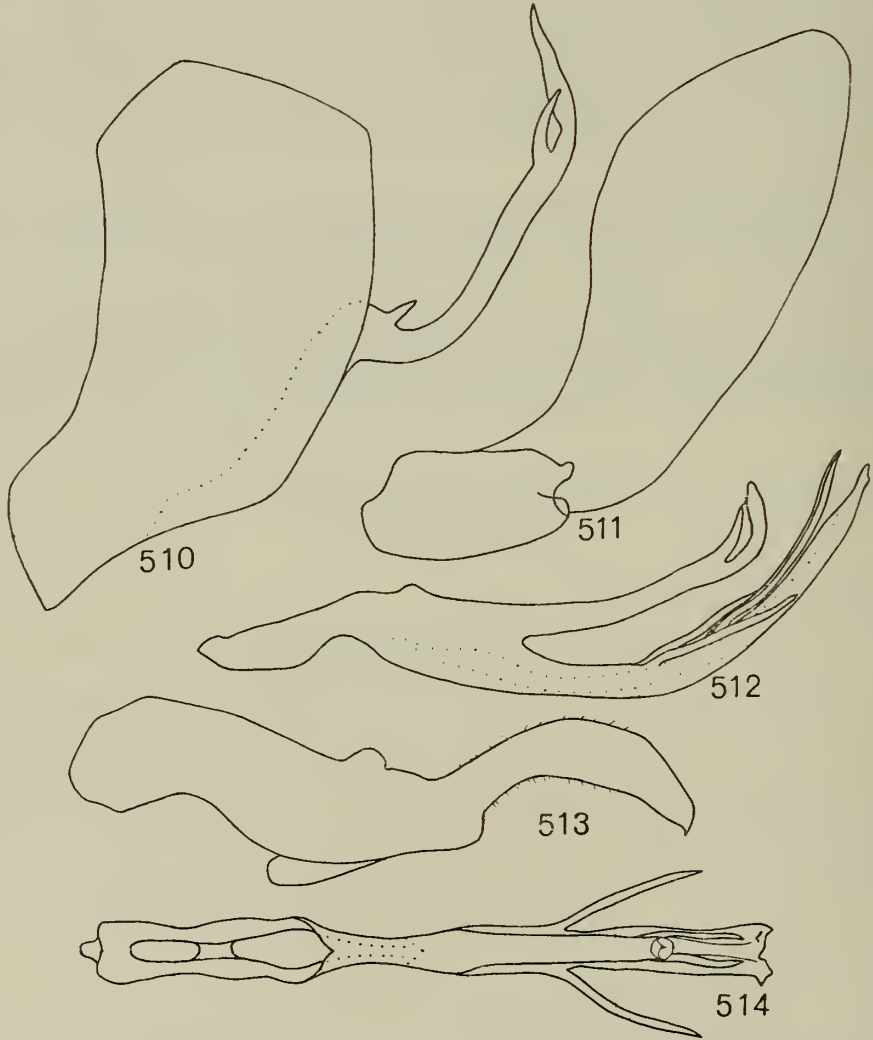
style with apex broadly curved; plate segmented subbasally, distal segment elongate, dorsal margin expanded medially.

SPECIMENS EXAMINED.

Holotype ♂, NEW GUINEA: Feramin, 120-150 m, 15-18.vi.1959 (*W. W. Brandt*) (BPBM, Honolulu).

BIOLOGY. Unknown.

REMARKS. This species is the only species known in the genus and is the largest among the Tharrini.



FIGS 510-514. *Haranthus pendiculus* sp. n. 510, male pygofer, lateral view; 511, plate, lateral view; 512, aedeagus, lateral view; 513, style, lateral view; 514, aedeagus, dorsal view.

CHECK-LIST OF THE SPECIES OF THE TRIBES
TINOBREGMINI, SANDERSELLINI AND THARRINI

TINOBREGMINI Oman

CHILELANA DeLong*artigasi* DeLong*TINOBREGMUS* Van Duzee*vittatus* Van Duzee*pallidus* Osborn **syn. n.***viridiscens* DeLong **syn. n.***moodii* Gibson*invenustus* Lawson **syn. n.***pallidus* var. *elegans* Lawson **syn. n.***vittatus* var. *clavatus* DeLong **syn. n.***brevis* DeLong **syn. n.**

SANDERSELLINI DeLong

SANDERSELLUS DeLong*CIXIDOCOELIDIA* Linnavuori **syn. n.***carinatus* DeLong*simplex* sp. n.*delongi* sp. n.*ornatus* sp. n.*linnavuorii* sp. n.*peniculus* sp. n.*retrorsus* sp. n.*truncatipennis* (Linnavuori) **comb. n.**

THARRINI trib. n.

NEOTHARRA gen. n.*ventrospiculata* sp. n.*THARRA* Kirkaldy*MUIRELLA* Kirkaldy **syn. n.***JASSOIDULA* Osborn **syn. n.***NISITRA* Walker **syn. n.***NISITRANA* Metcalf **syn. n.***tiarata* (Stål) **comb. n.***varipes* Walker **syn. n.***telifera* Walker **syn. n.***frontalis* sp. n.*flamma* sp. n.*nitida* sp. n.*rufivena* (Walker) **comb. n.***papuaensis* sp. n.*maculiceps* (Walker) **comb. n.***carinata* Baker **syn. n.***knighti* sp. n.*ventriosa* sp. n.*picta* (Montrouzier) **comb. n.***spinulata* sp. n.*biclades* sp. n.*bicornipes* sp. n.*insoluta* sp. n.*arca* sp. n.*solomonensis* sp. n.*robusta* sp. n.*doni* sp. n.*grandis* sp. n.*vesca* sp. n.*labena* Kirkaldy*kraussi* sp. n.*nakatai* sp. n.*permagna* sp. n.*bidentis* sp. n.*perbrevis* sp. n.*forissa* sp. n.*serrata* sp. n.*asolita* sp. n.*leai* Evans*costata* sp. n.*turrita* sp. n.*bispiculata* sp. n.*villosa* sp. n.*aurulenta* (Walker) **comb. n.***coacta* sp. n.*pectoides* sp. n.*perlucida* sp. n.*lineata* sp. n.*marlatti* sp. n.*borneoensis* sp. n.*quadrifida* sp. n.*leucomelana* (Walker) **comb. n.***pustula* sp. n.*gladia* sp. n.*villicaris* sp. n.*straminea* (Osborn) **comb. n.***infuscata* Osborn **syn. n.***vesiculata* sp. n.*maai* sp. n.*caledoniensis* sp. n.*danae* sp. n.*curtisi* sp. n.*gressitti* sp. n.*acusifera* sp. n.*evansi* sp. n.*hebridensis* sp. n.*metallica* (Osborn) **comb. n.***cuprescens* Osborn **syn. n.***vitiensis* sp. n.*hades* Linnavuori*kassiphone* Kirkaldy*ochracea* (Osborn) **comb. n.***limbata* (Osborn) **comb. n.***lenta* sp. n.*transversa* sp. n.

nausikaa Kirkaldy
nausikaa var. *pallidor* Kirkaldy
 syn. n.
subquadrata sp. n.
constricta sp. n.
flavomaculata flavomaculata Metcalf
rubrovittata Metcalf syn. n.
flavomaculata superba Linnavuori
flavomaculata palauensis Linnavuori
flavomaculata yapicola Linnavuori
flavomaculata ponapensis Linnavuori
ogygia Kirkaldy
atriceps Linnavuori syn. n.
kalypso Kirkaldy
atriceps lauensis Linnavuori syn. n.
nausikoides Linnavuori stat. n.
stabula sp. n.
ocellata Metcalf
crenulata sp. n.
bimaculata bimaculata subsp. n.
bimaculata vudalensis subsp. n.
tahitiensis (Osborn) comb. n.
insularis Osborn syn. n.

osborni Metcalf syn. n.
hackeri Evans
flavocosta sp. n.
dorsimacula (Walker) comb. n.
roseifascia Walker syn. n.
selecta Walker syn. n.
testacea (Walker) comb. n.
niuensis Osborn syn. n.
nigroides sp. n.
lutea (Montrouzier) comb. n.
pallida Osborn syn. n.
lamma sp. n.
oxyomma (Kirkaldy) comb. n.
kirkaldyi (Linnavuori) comb. n.
vittata (Montrouzier) comb. n.
neoguttatus Distant syn. n.
terminalis (Walker) comb. n.
guttata Walker syn. n.
sexguttata Walker syn. n.
subapicalis (Walker) comb. n.
HARANTHUS gen. n.
pendiculus sp. n.

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